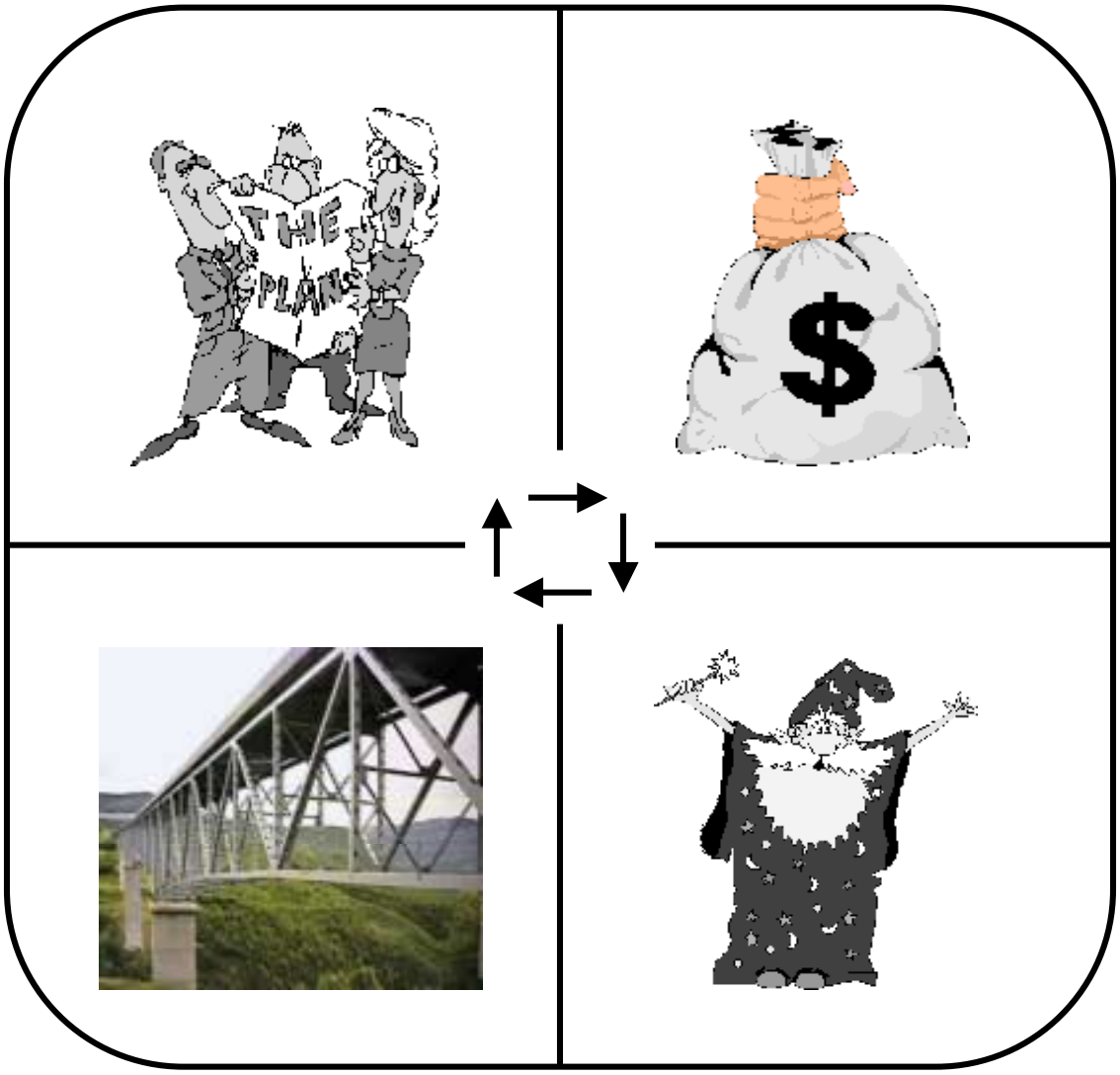
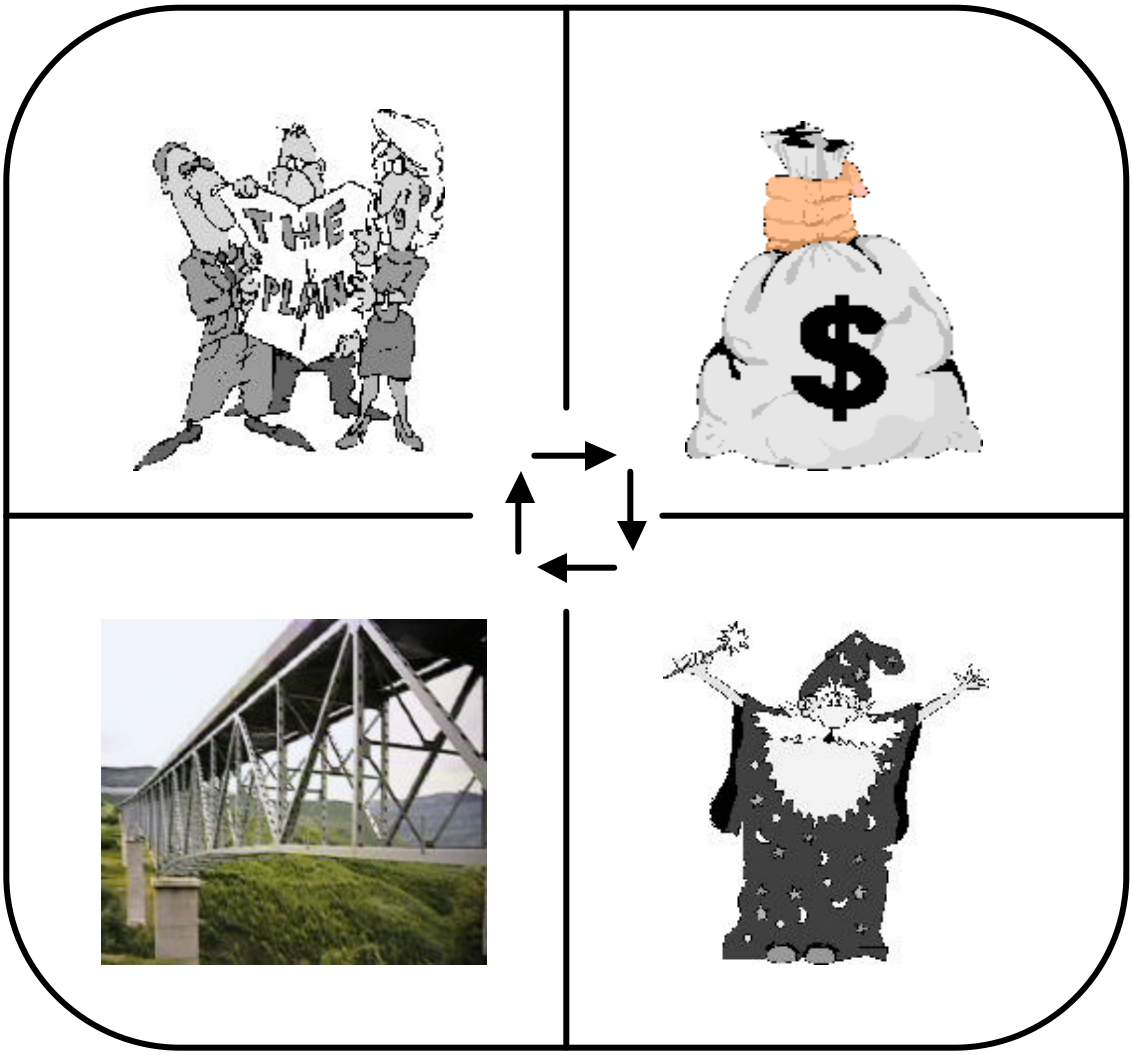
Programming And Operations Manual



May 2001

Washington State Department of Transportation

Programming And Operations Manual



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Washington State Department of Transportation
Planning and Programming Service Center
Program Management Office
PO Box 47325
Olympia, WA 98504-7325

Foreword

This manual was first distributed in September 1999. Minor revisions are constantly being made, and the web version is always kept current.

The manual was developed by a task force comprised of Program Management staff from the Regions and the Olympia Service Center. The following individuals contributed to this effort.

- Sponsor — Randy Hain (Director of Program Management)
- Task Force Chair — Ralph Wessels
- Technical Coordinator — Art Schoonover
- Task Force Members — Steve Olling, Kevin Dayton, Dave Honsinger, Jan Robinson, Ron Rolfer, Aaron Butters, Pat Morin
- Technical Writer — Brad Andrews
- Administrative Support — Cheryl Day
- Meeting Facilitators — Cheryl Munday, Irene Hertwig

We welcome your comments on the manual and your ideas for improvement. Please send your suggestions by mail, phone, or e-mail to one of the individuals below.

- Jan Robinson MS 47325 360-705-7144 robinja@wsdot.wa.gov
- Doreen Sinclair MS 47325 360-705-7121 sinclad@wsdot.wa.gov

The manual can also be viewed and downloaded from the Program Management Office homepage on the Department's internal or external websites:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/ (internal)
- http://www.wsdot.wa.gov/ppsc/programmanagement/ (external)

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Preface

This manual describes Program Management's role within the Washington State Department of Transportation, the primary duties and functions of the office, and how the office supports the development and delivery of the highway construction program. The manual provides background information to help the reader understand why things are done as well as detailed information to help explain how a given process or function is accomplished.

Who the Manual is For

The primary audience for the manual is staff in the Program Management offices in the Regions and the Olympia Service Center (OSC). These are the people who work with others to develop, manage, and deliver the highway construction program and who will use the manual as a resource to ensure this work is completed successfully.

A second audience for the manual is staff in other offices within the Department who play a role in developing and delivering the highway construction program. These are the people who provide support in areas such as design, traffic operations, construction, maintenance, financial management, budgeting, or transportation planning.

A third audience for the manual is legislators, legislative staff, or staff in other state or federal agencies. These people also play a role in the process and may want to see how their piece fits into the larger framework.

Why the Manual Was Developed

The manual was developed to:

- document the current practice and philosophy in Program Management
- ensure that consistent procedures are in place and available to all staff
- capture the knowledge and expertise of those currently working in Program Management so this knowledge is not lost
- provide a resource for anyone who needs to understand the work of Program Management

How to Use the Manual

Chapter 1 provides a basic overview of the work of Program Management and explains some of the key terms and concepts that need to be understood. Readers who are new to the Department or who are new to Program Management should begin with this chapter.

Chapters 2 through 6 provide details about the primary tasks performed by Program Management. Readers who need general information on the elements of a particular process or need instructions on how to accomplish a specific task should turn to these chapters.

The Reference Materials provide information and resources that can help any reader. This section includes a list of common acronyms, a glossary of key terms, instructions for completing the Work Order Authorization form and the Work Order Closure Request form, a list of staff in the Region and OSC Program Management offices, information about federal funding programs, a list of performance measures, and some useful charts and graphs.

Chapter 1: Introducing Program Management

Program Management's Role

The Washington State Department of Transportation describes its overall mission as follows: "Together we efficiently build, maintain, operate, and promote safe and coordinated transportation systems to serve our public." While this may seem a simple enough statement on its surface, it takes a coordinated effort by many people to turn this vision into reality.

The Department has primary responsibility for, or an interest in, many different modes of transportation. These include state highways, county and city roads, state ferries, state airports, public transportation, passenger rail, freight rail, marine ports and navigation, bicycle and pedestrian transportation, and aviation.

A document called the Highway System Plan (HSP) describes the Department's plan for maintaining, operating, preserving, and improving the state's highway system over the next 20 years. This document identifies the highway system needs and the funding needs for each of the four program areas involved. These are highway maintenance (Program M), traffic operations (Program Q), highway preservation (Program P), and highway improvement (Program I).

Program Management is responsible for the last two of these program areas: highway preservation and highway improvement. In some Regions, Program Management staff also provide support in other program areas such as bicycle and pedestrian transportation, county and city roads, and public transportation.

Purpose and Need for Program Management

Program Management seeks the most efficient means of utilizing the available funding and workforce resources provided by the Legislature and others to construct the projects that preserve and improve the state highway system. As projects are scheduled for construction, Program Management allocates funding, monitors progress, and reports results to the various WSDOT executives and funding stakeholders.

When necessary, Program Management adjusts the construction program to maintain expenditures within available allocations for each program. Program Management also ensures that projects planned for construction and under construction meet service objectives identified in the HSP and are consistent with legislative intent. Program Management works with many others both within and outside the Department to ensure the successful delivery of the highway construction program.

How Program Management Works With Others

Many groups play a role in ensuring that the objectives of the highway construction program are met and the system needs are addressed. For this effort to succeed, everyone must work together as an integrated team and information and decisions must be shared. The following pages describe some of the offices and groups which work with Program Management in developing and delivering the highway construction program.

- The **Transportation Planning Office** (TPO) works with the public and stakeholders on long-range objectives and priorities, identifying where the transportation system is deficient in meeting the objectives, developing long-range strategies and costs to address the deficiencies, and financially constraining the needs based on stakeholder priorities and projected revenues.

- The **Transportation Data Office** (TDO) provides data used to determine which projects should be built and to assess the effectiveness of completed projects in resolving highway system needs.

- The **Environmental Affairs Office** provides information used in planning and programming to help ensure that projects can be constructed without an adverse effect on the budget or the environment.

- The **Design Office**, in conjunction with the Federal Highway Administration (FHWA), sets the design standards that must be considered and incorporated into the selected projects, unless deviations have been approved.

- The **Bridge and Structures Office** provides preliminary design, schedule and cost estimates for bridge projects and also helps develop final plans, specifications and estimates for contracts.

- The **Materials Laboratory** provides expertise in analyzing soils, pavements, and materials during project planning and design and provides acceptance of materials during construction.

- The **Highway Maintenance Office** provides information on system needs in the planning, design and construction phases, and helps make sure that projects are designed and developed in a manner that ensures they can easily be maintained after construction.

- The **Construction Office** directs and monitors work performed by contractors and others on projects that address highway system needs and helps assess how any project changes might affect the overall highway construction program.

- The **Traffic Operations Office** contributes information used in prioritizing projects and helps provide conceptual solutions to traffic related improvement needs for the highway system. These solutions may become projects that are then programmed for construction.

- The **Budget Services Office** provides fiscal considerations throughout the program building process, helps generate revenue projections, shares this information with other offices to use in allocating funds to the various subprograms, and works with the Office of Financial Management (OFM) to ensure the Department complies with state laws.

- The **Accounting Services Office** assists in ensuring payment transactions are properly set up and paid on time and performs the billing function to obtain reimbursement from FHWA.

- The **Department Project Screening Board** (DPSB) reviews and approves major changes to programmed projects and the addition of new projects to the program.

- The **Budget and Program Group** (BPG) provides guidance on policy issues, project prioritization, and funding allocations and ensures a common and consistent approach to Department business.

- The **Transportation Commission** sets policy for the Department, determines funding levels that will be assigned to each program, approves the program of projects to send to the Legislature for funding approval, and establishes policies and rules which govern how the Department accomplishes its work.

- The **Federal Highway Administration** (FHWA) provides funding and design oversight to the Department and works with Program Management on processing approvals for federal funding, managing obligation authority, seeking special funding for emergencies, and applying to use funds not spent by other states.

- The **Legislative Transportation Committee** (LTC) conducts studies and provides oversight on transportation issues and works closely with Department executives and Program Management to present the highway budget and associated project lists to the Legislature.

What Program Management Does

Program Management describes its own mission as follows: "Working in partnership with others to facilitate the development and delivery of the Highway Construction Program." The primary duties which the Regionand Olympia Service Center Program

Management offices perform to support this mission are summarized below. Later chapters provide details about what is involved in accomplishing each of these functions.

Developing the Highway Construction Program: Prior to the beginning of each biennium, Program Management develops a specific list of projects which will be started, continued, or completed within the coming biennium. This involves scoping projects, prioritizing project needs and solutions, building the highway construction program, then reviewing and approving the program.

Managing Project Funds: After the Legislature has approved the construction program, work begins on individual projects. Program Management prepares and processes work order authorizations and federal aid agreements to allocate funds to individual projects. The office tracks project funding, makes adjustments to work orders or federal aid agreements as necessary, and closes out work orders when projects are completed.

Managing Change: In addition to managing project funds, Program Managementalso manages change at the program and subprogram level. This involves monitoring program level expenditures, managing changes in project scope or cost, making adjustments to the program as necessary, and managing the overall program to ensure that available funds are used most efficiently.

Measuring and Reporting on the Program: Program Management continually measures performance and provides reports to various groups to ensure successful delivery of the construction program and to ensure that the completed projects address the needs identified in the Highway System Plan. Measurements and reports are provided to the Legislature, the Transportation Commission, FHWA, the public, other WSDOT offices, and other state agencies.

Providing Customer Support: Program Management provides various kinds of support to internal and external customers. The office provides formal and informal training, informational and instructional materials, assistance with inputting and maintaining data in computer databases, system documentation, and help with answering questions posed about the highway construction program.

Rules That Govern the Work

The work done by Program Management is impacted by numerous rules, guidelines, directives, and policies. At the federal level, Program Management must comply with policies and rules set forth by other agencies such as the Federal Highway Administration and regulations established by the National Environmental Policy Act (NEPA) or the Federal Emergency Management Act (FEMA). When federal legislation is passed, such as the Transportation Equity Act for the 21st Century (TEA21),

Program Management must take steps to understand the specific requirements of the bill and to comply with the federal funding provisions set forth.

At the State level, the law which governs project prioritization and program development is RCW 47.05. Other state laws and rules also have an impact on program development and delivery. The Office of Financial Management has established specific accounting practices by which the Department must abide. In addition, the budget passed by the Legislature often includes certain funding provisions. And finally, court action can hand down decisions which can impact a given project or a Department practice.

Within the Department, the Budget and Program Group establishes directives and policies which can affect procedures within Program Management, and the Department Project Screening Board establishes guidelines for reviewing and approving project changes or additions. Program Management must understand these various laws, rules, and directives and make sure it accomplishes its work in compliance with them. At times, Program Management also will take an active role in seeking ways to help shape the rules by which it operates.

Key Elements and Concepts

To begin to understand the work of Program Management, it is necessary to have a basic understanding of some key elements and concepts. The following pages describe these elements. These descriptions are not intended to cover every nuance of a given topic but simply to provide a starting point for understanding.

Washington's Transportation Plan

Washington's Transportation Plan, a document prepared by the Department's planning community for the Washington Transportation Commission, provides a 20-year view of the state transportation system. This document includes goals, service objectives and action strategies for all modes of transportation. It looks at the state-owned system as well as other systems which the state has an interest in such as ports and railroads.

Of special interest to Program Management is the portion of the plan which focuses on the state highway system. This portion, referred to as the Highway System Plan (HSP), describes how the Department will maintain, operate, preserve and improve the state highway system over the next 20 years. The Commission developed the plan's initial vision and goals from a series of recommendations by a public policy task force comprised of transportation leaders from both the public and private sector.

The Department's planning community worked with the Commission to translate the vision and goals into a set of service objectives with specific action strategies to

accomplish them. These objectives were modified based on public input and adopted by the Commission. The Commission has the planning community review and revise the plan on a periodic basis.

For a current copy of the Highway System Plan, see :

- http://www.wsdot.wa.gov/ppsc/wtp/

System Needs

The Department's planning community is responsible for comparing the objectives and action strategies outlined in the Highway System Plan to the existing highway system in order to identify shortcomings or needs in the highway system. This initial analysis identifies the total system needs, without regard to how long it might take to solve them. Cost estimates to solve each need are made on a cost per mile or a cost per square unit basis and then summed up to a preliminary total. This total is compared to the potential revenue the Department may receive over the next 20 years in order to determine how many of the needs can actually be met. This process of determining system needs is required by Washington's Growth Management Act and the Federal Transportation Act.

20-Year Revenue Projections

Estimating the amount of revenue the Department might receive over a 20-year period is not an easy task. Efforts to predict the number of gas tax or motor vehicle excise tax increases were discarded because of the potential for public concern. Instead, the OSC Economics Branch found that citizens of Washington have spent approximately $25 of every $1,000 of their personal income (in 1994 dollars) to maintain, operate, preserve and improve the state highway system. After estimating how much personal income might grow over the next 20 years, the Economics Branch was able to project future revenue. This historical analysis took into account all state, federal and local dollars spent on the highway system.

Because the cost of solving the highway system needs can and has exceeded the projected revenue in the past, the Commission directed the planning community to develop a process to prioritize the identified needs in order to balance to the projected 20-year revenue. This process is known as constraining the Highway System Plan.

Constraining the Highway System Plan

The process the Transportation Planning Office (TPO) uses to constrain the Highway System Plan involves a number of key steps:

- The TPO uses a public involvement process to identify which of the action strategies in the system plan are most important.

- Based on the public's input and an impact analysis of delaying the public's lowest priority action strategies, the Commission makes a decision of which action strategies to reduce or delay beyond 20 years.

- Once the Commission makes its decision, the TPO selects the final list of needs through a collaborative process which includes input from the Region and OSC offices, except for mobility needs.

- When the decision involves a mobility need, the Region offices work with the local planning organization for urban areas (Metropolitan Planning Organizations) or rural areas (Regional Transportation Planning Organizations) to select which mobility needs will be delayed.

In general, the Highway System Plan identifies a proposed strategy and estimated cost for solving each need except for certain categories of needs, such as those for paving, bridge painting, or unstable slopes. For these exceptions, the HSP discusses general approaches for solving the need and inserts an approximate value based on an economic model.

Once needs have been constrained to match the funding available over 20 years, the Department's programming structure is used to develop a budget proposal for submittal to the Transportation Commission.

Programming Structure

In 1992, a task force of the Legislative Transportation Committee (LTC) directed the Department to develop a programming structure for the highway system which would allow the Legislature to make investment decisions based on specific action strategies in the Highway System Plan. As a result, a structure was developed with a budget category for most of the action strategies in the HSP.

The Legislature uses this programming structure to make investment decisions by establishing a biennial appropriation That is, it sets a maximum spending limit for an express purpose for each program. In the capital budgets for most state agencies, a maximum spending limit is established at the project level within the program. Because the Department has hundreds of projects each biennium within a given program, the potential exists for significant delays if a project uses up its maximum spending limit before the next legislative session.

In order to minimize this potential problem and still provide the Legislature a method to control expenditures and track budget dollars and commitments, the Legislature and Department agreed to a modified approach which allows the Department to group capital projects into programs, subprograms, and categories based on the

Commission's action strategies, service objectives and goals. The Department has identified three subprograms within the preservation program and six subprograms within the improvement program. These subprograms and their service objectives are described below. Figure 1.1 on the following page shows the current programming structure for the Department.

Program P - Highway Preservation

The objective of this program is to preserve the highway infrastructure cost effectively to protect the public investment. The action strategies are:

- Subprogram P1 - Roadways
  Repave highways at regular intervals to minimize long-term costs; restore existing safety features.
- Subprogram P2 - Structures
  Rehabilitate or replace existing bridges and other structures to preserve operational and structural integrity; reduce the risk of catastrophic bridge failure.
- Subprogram P3 - Other Facilities
  Stabilize known unstable slopes; refurbish safety rest areas; construct weigh facilities; rehabilitate or replace existing drainage structures; rehabilitate or replace existing electrical, electronic, and mechanical systems.

Program I - Highway Improvement

- Subprogram I1 - Mobility
  The objective of this subprogram is to improve mobility within congested highway corridors.
- Subprogram I2 - Safety
  The objectives of this subprogram are to provide the safest possible highways with available resources and to improve pedestrian safety.
- Subprogram I3 - Economic Initiative
  The objectives of this subprogram are to reduce delay to freight movement on state highways, to partner with public and private entities to improve the highway system in support of trade and economic development, and to provide integrated traveler services and tourism support.
- Subprogram I4 - Environmental Retrofit
  The objective of this subprogram is to retrofit state highway facilities as appropriate to reduce existing environmental impacts.
- Subprogram I6 - Sound Transit
  This subprogram was added in the 97-99 biennium. Its objective is to partner with Sound Transit (formerly known as the Central Puget Sound Regional Transit Authority) to provide improved transit access to state highways.
- Subprogram I7 - Tacoma Narrows
  This subprogram was added in the 99-01 biennium. Its objective is to improve

mobility along the SR 16 Tacoma Narrows Bridge corridor by partnering with private firms to design and build improvements.

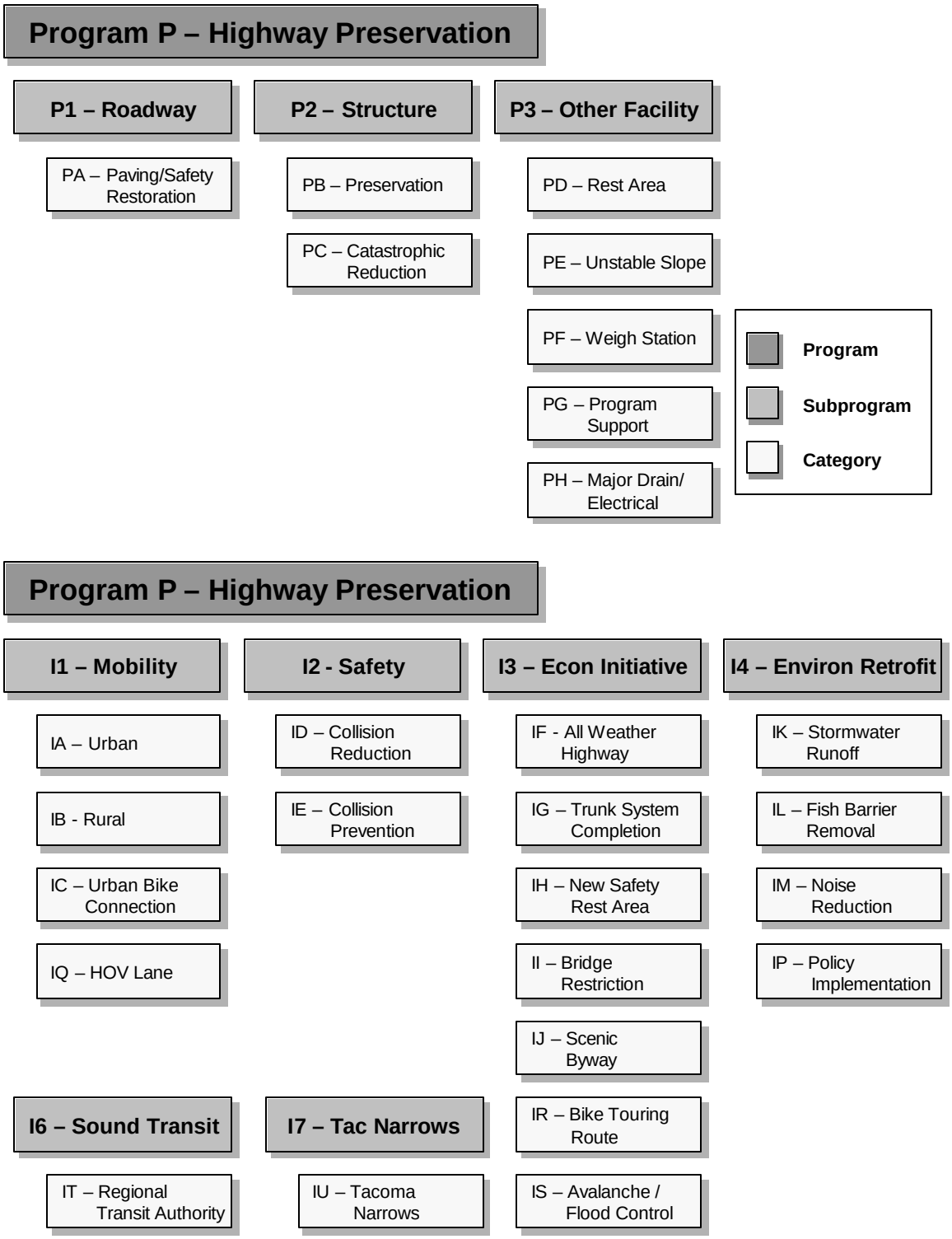


Figure 1.1 - Programming Structure Modified January 2001

Prioritizing Projects

Since not all highway system needs can be addressed with available revenues, a methodology needed to be developed for setting priorities and for developing a prioritized list of projects for each budget category in the Highway System Plan. This methodology compares the benefits gained to the cost incurred for solving a given need. The objective is always to seek the greatest possible improvement in those areas in which the Legislature has chosen to invest.

Because Regions do not have the workforce necessary to scope twenty year's worth of needs in the system every budget cycle, Program Management has developed an approach to minimize the volume of work and still identify the best projects. First, needs are ranked within each budget category based on a measure of their need or potential benefit. Second, the Regions scope or define projects to solve the needs in rank order, in accordance with the design matrices. These matrices define the level of development based on the functional class of the highway and the category of need. Third, the Regions apply the priority methodologies (based on the benefit cost approach) in order to prepare a list of prioritized projects for each budget category. Program Management takes these prioritized lists of projects along with their benefits and costs and prepares budget scenarios from which the Commission selects a preferred alternative or alternatives for submittal to the Legislature. Included with the recommended budget alternative is a list of projects for each category and the amount of funding needed for each project during the proposed budget period.

In developing a proposed budget, a number of questions must be considered: How much of the projected 20-year revenue will be available in the next six years? Will there be a revenue shortfall in comparison to the projection? Will the Commission recommend that the Legislature pass a bill increasing revenues? How much of the existing or proposed revenue will the Commission allocate to the highway construction program for the next biennium and the next six years? Once these questions have been addressed, the Department can prepare a six-year plan.

Six-Year Plan

The Budget Office along with various offices in the Planning and Programming Service Center share responsibility for developing a six-year plan for the Commission. This proposal includes a six-year forecast of available revenue by fund source, recommended investment levels by program from the Washington Transportation Plan, information about any revenue shortfalls that exist, recommendations on how to allocate existing revenues, and proposed revenue increases between the programs.

The Department is still debating how to develop a recommendation for allocating funds between programs. A number of different approaches have been tried in previous

budget cycles and approaches are still being refined. The common elements which have existed in all approaches have been to involve the program managers in preparing preliminary budget scenarios for evaluation, and to seek input from the Department executives.

Once a six-year plan has been determined, Program Management can finalize its budget request. In recent years, two different budget requests have been submitted for approval. The first is based on currently available revenue and is referred to as the Current Law Budget. The other is based on a proposed revenue increase and is called the New Law Budget.

Creating a Biennial Program

Each biennium, Program Management submits the Current Law Budget and the New Law Budget along with the proposed list of projects (the Legislative Book) to the Commission. The Commission reviews these highway construction budgets along with the proposed budgets for all other programs within the agency. It seeks public comment on the proposed budgets and then works with the program managers to incorporate public comment into the final budget proposals. After the Commission has approved the two budgets, it sends them to the Legislature.

The Legislature's goal is to make an informed decision about how to invest the available funding among the different programs within the Department. As with the Commission, the first step the Legislature takes is to hold public hearings in which the Department and the public have an opportunity to testify on the proposed budgets and any potential revenue increases. The Legislature often requests additional information from the Department during this phase of the budget review process. These requests tend to have a specific focus and must be responded to in a short time frame.

After its review, the Legislature determines where to invest existing revenues and whether to pass a bill authorizing the collection of additional revenue. Another option they have is to refer the revenue issue to a vote of the people. If the Legislature authorizes the collection of additional revenue, it will also stipulate where the revenue will be spent. In the final budget that is passed, the Legislature authorizes expenditures in each program by establishing an appropriation for the work. The appropriation is broken down into subprogram allocations which are then used to fund the individual projects within the highway construction program. Figure 1.2 shows the steps involved in the funding cycle.

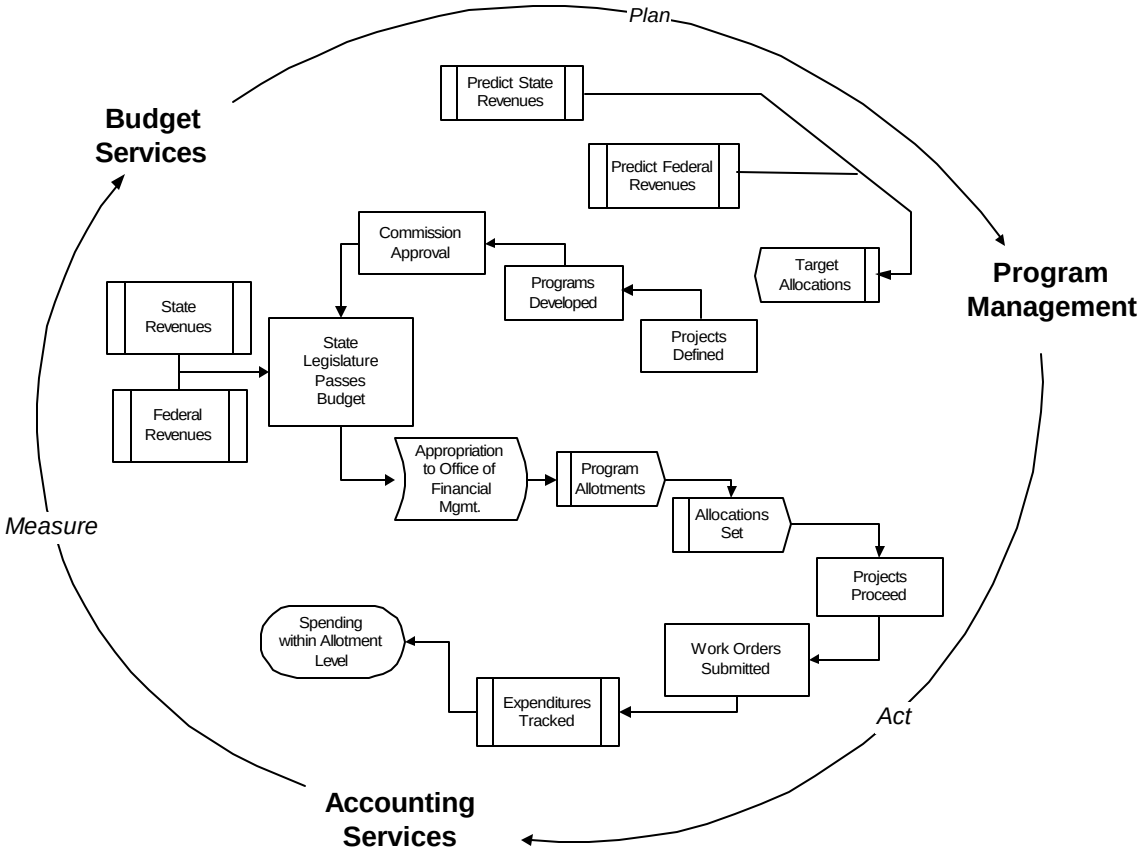


Figure 1.2 - Funding Cycle

Chapter 2:
Developing the Highway Construction Program

Overview

In every odd-numbered year, the Washington State Legislature meets to consider and pass an operating budget. One piece of this budget is funding for the highway construction program. Prior to the beginning of the session, Program Management develops a list of projects proposed for the next biennium. This list, called the Legislative Book, includes projects that will continue or "carryforward" from the current biennium and projects that will begin or have a "new start" in the coming biennium. After the Legislature has completed its work and set funding appropriations, Program Management develops a final list of projects planned for the next biennium. This list is called the Operating Book. It defines the work the Department will accomplish in the biennium and establishes a baseline to use for measuring program delivery.

The process that Program Management undertakes to develop the highway construction program is called Book Building. This chapter describes one complete Book Building cycle from beginning to end. The basic process consists of a number of different activities which include: prioritizing project needs and solutions, building the program, reviewing the program, approving the program, and implementing the approved program.

The process itself is not always simple or straightforward. Since the entire cycle spans two biennia, an activity from one Book Building cycle may be going on at the same time as an activity for the next Book Building cycle. For example, at the same time that work is going on to establish the Operating Book for one biennium, work will already be underway to identify needs for the next biennium. In addition, activities in each cycle will often overlap. For example, programming instructions are usually developed at the same time that program targets are set. Book Building is a dynamic process with no clear beginning or defined end.

Figure 2.1 shows a timeline of the primary tasks involved in the Book Building cycle over two biennia. The remainder of the chapter provides details about each of the steps in this process.

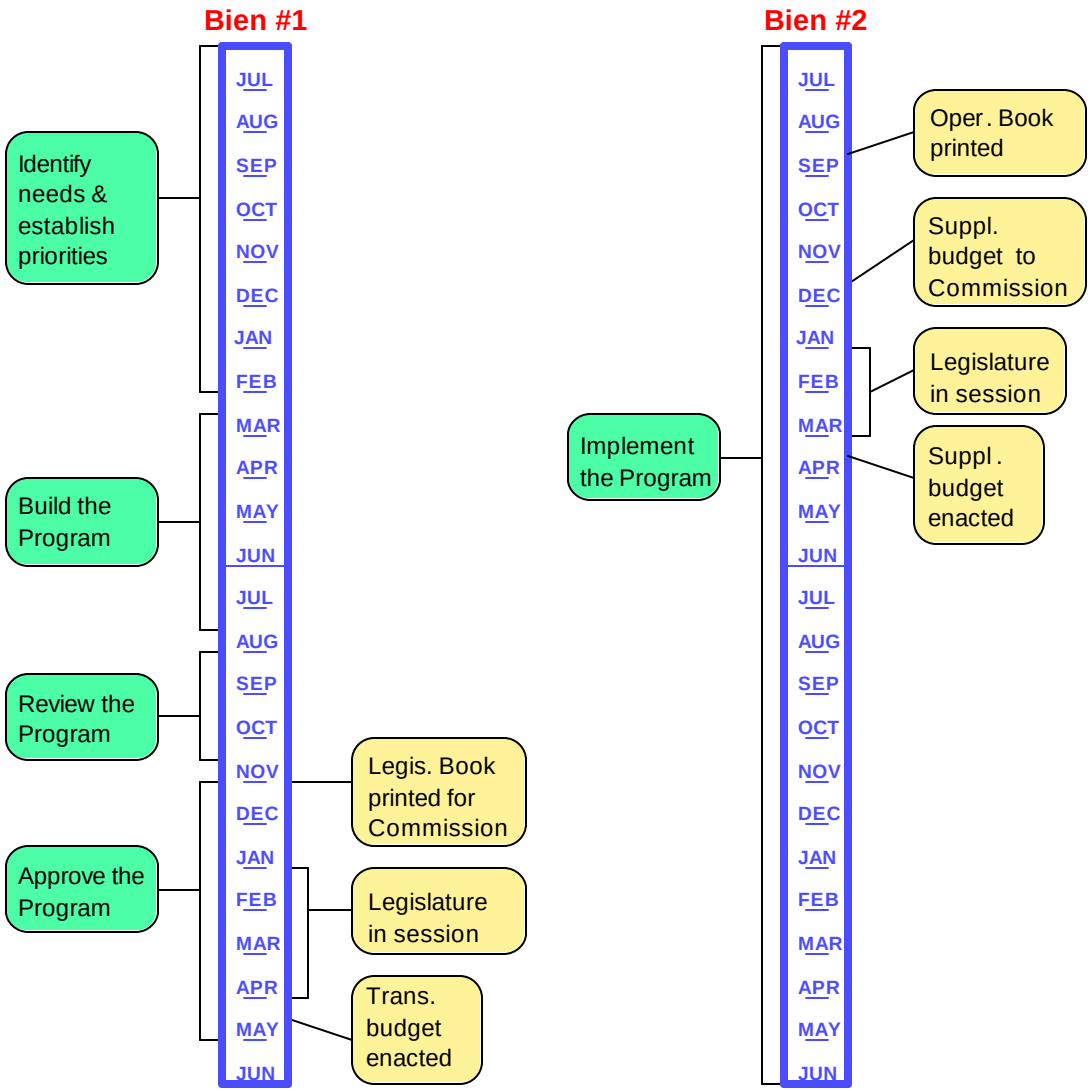


***Figure 2.1* - Book Building Process**

Prioritizing Project Needs and Solutions

Each category of work within the highway construction program has a set of needs which were identified by comparing a specific action strategy in the Washington Transportation Plan to the existing highway system. These needs are met by developing a project to program. The Legislature has directed the Department to prioritize (select) projects for each category of the program based on the benefits returned to the transportation user.

All identified needs for prioritization are available from the Priority Array Tracking System (PATS). PATS is the Department's official source for priority information. Other sources of the same data should be considered informational only. If there is a discrepancy between the information from another source and the information in PATS, contact OSC Program Management for clarification.

The Regions must program a project or provide an explanation/justification for not programming a project for each need identified in PATS. Fields are available in PATS for Regions to enter an explanation/justification on each deficiency. For detailed instructions about working in this system, see:

- http://www.wsdot.wa.gov/ppsc/pgmmgt/pats/

Background Information

Program Management begins the prioritization process for a category of work by identifying the potential benefit(s) associated with solving the need. For instance, a High Accident Corridor need in the Collision Reduction category is identified because accidents generate a cost to society. If these accidents can be eliminated by constructing a safety improvement to the highway, then the cost to society will be reduced and a benefit gained. Travel time savings are not included as a benefit because the primary objective of the Collision Reduction category is to reduce the cost of accidents not travel time delay. If travel time were taken into consideration, it could skew the selection process and identify projects which reduced travel time but did little to reduce the societal cost of accidents.

The next step involves developing a scope of work to address the need in order to determine how much of the potential benefit can be obtained and at what cost. There are not sufficient resources to analyze the benefits and costs on all needs in each category of the program each biennium, so a simplification has been made to reduce the effort. Because the primary objective of the Department's prioritization process is to provide the largest improvement for the least possible cost, needs in each category are ranked based on their potential to provide a benefit.

The Regions scope projects to address the needs in rank order. The biennial programming instructions help the Regions determine how far down the ranked lists to go. The scope of work to solve a need can vary greatly among engineers. To promote consistency, the design community, with the assistance of the planning and programming community, has developed a set of design matrices. Each design matrix sets forth the level of development for a given type of need which would be automatically approved by the Department and FHWA. Deviating from the matrix requires approval. The approving authority varies depending on the functional classification of the route and type of work. The Design Manual provides details about these design matrices and a list of the approving authorities. The Design Manual only spells out who needs to approve a deviation which is less than that identified by the design matrices. In those instances where the scope of work exceeds the design matrix, approval is required by the OSC Program Management Engineer.

The Regions prepare a cost estimate for the approved scope of work and compare the cost to the potential benefit in order to determine which projects are the most beneficial to construct. This approach allows different needs to be prioritized for the same section of highway every couple of years. Because the Department does not want to inconvenience the traveling public any more often than necessary or to spend unnecessary funds on traffic control and contract administration, the prioritization process includes a provision to align priorities. If projects to solve the needs would have prioritized within a six-year time frame, then the Region may adjust priorities to combine the work into a single contract.

The following pages define each category of work and provide information on how to determine project priorities.

Paving/Safety Restoration

There are three types of pavement included in this category: bituminous, asphalt and concrete. Each biennium, the most pressing needs are identified by the Department's Pavement Management Section. They obtain information about the roadway's paving and maintenance history and about existing conditions. They use this data to predict when re-paving is due. The pavement life cycle varies depending on the type of pavement and weather conditions. See Appendix H for graphs of average pavement life cycles and life cycle costs. In general, bituminous and asphalt sections are repaved several times during a 20-year period. As a result, specific paving needs are not included in the Highway System Plan.

Pavement data is stored in the Washington State Pavement Management System (WSPMS) and is sent to the Region program managers and materials engineers around July of each year. The Regions use the odd-year version of the data to select projects and then scope solutions for the new biennial program. OSC Program Management also enters the data needed for prioritization into PATS.

The Regions select projects by addressing their lowest life cycle cost needs (due work) first. The Regions can identify the needs by looking up the paving due year in WSPMS or in PATS. Those sections with a re-paving due year within the next three years are considered due work. For example, in the 99-01 biennium, 2000, 2001 and 2002 are the due years. Sections with an earlier due year are considered "past due" while those with a later due year are "future due." If the Regions have more due sections than they have allocations, they further prioritize the projects based on functional class of the highway. Interstate routes are done first, followed by principal arterial, minor arterial, and then collectors.

Structure Preservation

This category of needs is made up of six types of work: bridge replacement, bridge rehabilitation, bridge deck restoration, special bridge repair, bridge painting, and miscellaneous structure repair. The structure preservation needs are identified by the Department's Bridge Planning Section with the technical

assistance of the Bridge Condition Section. Needs are ranked statewide by type and sent to the Region program managers in the fall of the odd year. The data needed for prioritization is available in PATS.

Catastrophic Reduction

This category of needs is made up of two types of work: seismic retrofit and bridge scour. The needs are identified by the Department's Bridge Planning Section with the technical assistance of the Bridge Condition Section. Needs are ranked by type and sent to the Region program managers in the fall of the odd year. The data needed for prioritization is available in PATS.

Rest Area Preservation

The needs in this category include three types: sewer/water, building, and site. They are developed by the Highways and Local Programs Service Center with the technical assistance of the Department's Safety Rest Area task force. The task force has recommended that initial emphasis be placed on improving sewer and water needs because of the potential risk if health code standards are not met. Their second emphasis area is building replacement or rehabilitation needs. The last area of emphasis is site work which includes preserving such items as sidewalks, picnic tables, and plantings. The needs are combined into a statewide ranked list and prioritized statewide based on the cost per rest area visitor.

Unstable Slopes

The needs in this category were initially identified by the Region maintenance staff. The list of unstable slopes was evaluated by the Region materials engineers using a method developed jointly between the Department's Geotechnical Section and Washington State University (WSU). The method includes eleven criteria. A score is used to assess the risk for a given slope to slide. Slopes are then ranked in descending order. The location of the slope and its rank are contained in PATS. Each biennium, the Geotechnical Section provides the Regions an opportunity to suggest revisions to the list of needs then ranks the needs in sequential order and develops a recommended solution for each need. The recommended solutions are sent to the Region Program Management office to calculate an estimate for the work. The Regions prepare an estimate and send the estimates back to the Geotechnical Section so they can complete a benefit cost analysis for each slope.

The benefits for this type of work include the cost of maintenance to clear debris from the roadway, travel time delay for motorists, and accident costs. The Geotechnical Section prioritizes the slope recommendations in benefit cost order on a statewide basis and this information is entered into PATS. The prioritized list is forwarded to OSC Program Management for inclusion in the biennial programming instructions. The ultimate goal of the Geotechnical Section is to have approximately six years of unstable slopes prioritized.

In addition to the statewide prioritized list, a minor capital reserve for unstable slope work is set up for each Region. The Region can use this reserve to pay for unstable slope work such as geotechnical studies or low-cost slope corrections.

Weigh Stations

The needs in this category were initially identified by the Commercial Vehicle Enforcement Office of the Washington State Patrol. They convened a statewide meeting of all the weigh masters and developed a 20-year list of needs. They established short-term and mid-term priorities. Every biennium this information is reviewed and updated if necessary. The location of the needs and their priorities are available in PATS.

The Department scopes projects which address weigh station needs based on a Memorandum of Understanding with the Washington State Patrol. The memorandum spells out which portion of work each agency will pay for.

Program Support

There are no specific needs identified in the Highway System Plan for this category. The funding is set aside to pay for items of work which provide general support for the highway construction program. Eligible work includes activities such as legal services, right of way plan updates, and audit reviews of contracts. This category also includes a reserve for emergent needs in the Regions. Regions can spend the reserve on eligible work in the preservation and improvement subprograms. Because there are no specific needs in this category, no prioritization process is involved.

Major Drainage and Electrical Systems

The needs in this category have been identified by regional planners working with colleagues in the Region Maintenance and Traffic Operations offices. Needs are reviewed against a set of eligibility and deficiency criteria developed by a statewide task force. This process creates a final list of needs by Region. The 97-99 biennium was the first time this category was in place and some refinement of the prioritization process is still necessary.

Urban and Rural Mobility

The prioritization processes for these two categories of need are similar and are described together here. The OSC Planning Office identifies the initial needs and sends them to the planners in each Region and to the Office of Urban Mobility to review. The Region can expand or add sections based on local traffic volumes. The planners work with their counterparts in local government to identify which of these needs are the most important. This step is necessary if the list of mobility needs has to be constrained to match limited revenues. Next, the list of constrained needs is returned to OSC for inclusion in the Highway System Plan

and for entry into PATS. OSC Program Management forwards these constrained needs on an unranked list to the Region program managers for scoping and prioritization. Only projects which address the needs on the constrained list are eligible for prioritization.

The prioritization process evaluates projects against five criteria: benefit cost, community support, environmental impact, land use, and multi-modal. A separate score is given for each criteria and the five scores are combined into a single value using a mathematical formula developed by a software package called TOPSIS (Technique for Order Preference by Similarity to Ideal Solution). The value for each project is used to develop a statewide priority. The projects are initially prioritized statewide in the event the Legislature decides to select projects on that basis. In order to ensure a consistent application of the prioritization process, the Regions forward their evaluation to the Transportation Data Office for review. Following this review, the Mobility Program Manager creates the statewide priority list and then breaks out the projects in sequential order by Region.

Urban Bicycle Connections

The needs in this category are developed by the Highways and Local Programs Service Center. They use the technical expertise of a statewide bicycle committee which includes a Department representative and a public representative for each Region. They identify the needs and prioritize them based on a point system which evaluates the benefits and costs of each project. The prioritized list of projects is forwarded to OSC Program Management for inclusion in PATS and the programming instructions.

Core High Occupancy Vehicle Lanes

The initial needs in this category were identified for King, Pierce, and Snohomish counties and developed by the Office of Urban Mobility working with a task force including representatives from the Northwest and Olympic Region and the Olympia Service Center. These needs were entered into PATS and the projects to address them were prioritized by the Office of Urban Mobility. At present a proposed action strategy which would add new core systems in other parts of the state is being discussed.

Collision Reduction

There are three types of needs in this category: high accident locations (HALs), high accident corridors (HACs) and pedestrian accident locations (PALs). The HALs, HACs and PALs are identified based on collision reports submitted to the Washington State Patrol. These needs are ranked region-wide based on the societal cost of their accident history. The location of accidents and their rank is sent to the Region program managers and entered into PATS.

The Regions analyze the locations in rank order in accordance with the programming instructions. They then develop a recommendation to address the need. For example, they might decide either to: have Traffic Operations perform a minor operation improvement, have Traffic Operations monitor the location, refer the need to a local agency if it is located in a city with a population over 22,500 and is not on a limited access corridor, program a minor capital improvement in Traffic Operations (Program Q), or program a capital improvement in thesafety reduction category.

If the Regions choose to solve the need with a capital improvement, they are required to perform a benefit cost analysis in order to determine its priority. This value is entered into PATS from which a prioritized list of projects can be obtained. The Regions may advance or defer a prioritized safety project under certain conditions. If the project would be programmed within the next six years, the Regions might combine it into a single contract with another prioritized project in order to minimize traffic disruption and reduce contract costs.

Collision Prevention

The needs in this category consist of four types: interstate safety matrix, roadway run-off (risk), at-grade intersections, and signals and channelization. The needs are prioritized based on the cost benefit of reducing the potential societal cost of accidents, except as noted below.

The needs in the interstate safety matrix group are identified by Region and include any design feature which does not meet the standard specified in the Interstate design matrices. This work is usually done at the same time other work is programmed such as paving. The needs in the roadway run-off (risk) group are identified by the Planning Office based on roadway and roadside data from the Transportation Data Office. The Regions have an opportunity to review and modify the results. The needs are ranked based on the potential cost of accidents as a result of the existing conditions. The Regions analyze the needs in rank order and recommend a solution in accordance with the design matrices. They then calculate the benefit cost of the solution and enter the value into PATS. The projects are prioritized on a region-wide basis.

The needs in the at-grade intersections group are identified by the Planning Office based on a set of criteria approved by the Department. The needs are ranked based on a method developed by the Highway Safety Issues Group. This group advises the Director of Program Management, the State Traffic Engineer, and the State Design Engineer on safety issues. The Regions analyze locations and recommend solutions to address the identified needs. They then calculate the cost benefit of the project and enter the value into PATS.

The needs in the signals and channelization group are identified by the Region. Each Region is responsible for preparing a prioritized list of needs for locations that meet traffic volume and signal warrants as detailed in the WSDOT Traffic

Manual. The regional allocation for signals and channelization workis used to construct intersection improvements at these locations.

All-Weather Highways

The needs in this category are identified as those sections of highway which are susceptible to damage by heavy loads when the roadway thaws after a freeze. A statewide task force (consisting of the Pavement Management Engineer and representatives from the planning, design, program management and maintenance offices) has developed criteria to identify sections of roadway susceptible to freezing and thawing. The roadway surface depth is compared to the frost depth and if the roadway surface depth is less than 50% of the frost depth then the roadway section is deficient.

The Regions review these sections with the task force and develop a final list of needs. Those sections which have been closed to traffic in the past due to freezing and thawing are put in the constrained system plan and the remaining sections are put into the unconstrained plan. A section can be placed in the constrained plan if it will be less expensive to rebuild than to continue spending above average amounts on maintenance and paving. The needs in the constrained system plan are unranked. Priorities are determined by the Regions after conferring with the local RTPOs to identify the most needed sections.

Trunk System Completion

The OSC Planning Office identifies the needs in this category by working with the Transportation Data Office to identify the state's T-1 freight corridors (highways which carry 10 million tons or more of freight each year). The Transportation Commission determines which of these routes are to be placed in the constrained system plan with the remainder being placed in the unconstrained plan.

New Safety Rest Areas

The Highways and Local Programs Service Center works with the Regions and other government agencies to identify locations for new rest areas on state highways and to look for partnership opportunities. The location of these rest areas is entered in PATS and prioritized based on the cost benefit of the facility. The benefit of the rest area is based on the number of projected visitors.

Restricted Bridges

This category of needs is made up of two types of work: low vertical clearance under-crossings on the Interstate (clearance less than 15ft. 6in.) and load restricted bridges (licensed legal overloads). These needs are identified by the Bridge Planning Section with the technical assistance of the Bridge Condition Section.

Needs are ranked by type and sent to the Region program managers in the fall of the odd year. The data needed for prioritization is available in PATS.

Based on discussions with the Commercial Vehicle Permit Office and the Bridge and Structures Office, the low vertical clearance structures on the Interstate have been given priority over the load restricted structures. Within the group of Interstate structures, bridges are ranked based on their detour length. Detour length is used because it corresponds to travel time delay which is the most significant benefit impacted by these structures.

Scenic Byways

There is no prioritization process for this category because projects are selected through a competitive grant process. The Highways and Local Programs Service Center works with Regions to submit grant applications to FHWA for a national competitive process. If a grant is awarded, work can be carried out on a project.

Bicycle Touring Routes

The Highways and Local Programs Service Center and the Transportation Data Office have identified where a four-foot bike shoulder does not exist on the state's six rural bicycle touring routes. They also have determined where the needs in the high accident and risk categories on these six routes can provide a four-foot shoulder. The remaining roadway sections have been identified and entered into PATS. The Regions look for opportunities to solve these rural bike needs by combining them with programmed work in other categories. This approach minimizes traffic disruption and reduces contract costs.

Avalanche and Flood Closures

The OSC Planning Office has identified roadway segments on T-1 freight corridors (highways which carry 10 million tons or more of freight each year) on which travelers have experienced delays due to avalanche and flood closures. These needs have been entered into PATS.

Stormwater Run-off

The Environmental Affairs Office (EAO) surveys all storm drains which flow into a water body. Each of these storm drains is identified as a need and is further rated from high to low. The EAO has been working with Washington State University to develop a method for prioritizing needs based on a cost benefit approach. Their results are forth coming.

Fish Barrier Removal

The Washington State Fish and Wildlife Department has surveyed all the culverts on the state's highway system and identified those which impede the migration of

fish. These needs have been entered into PATS. The Fish and Wildlife Department is conducting habitat surveys to determine the potential for migratory fish recovery and is prioritizing the culverts based on the results.

Noise Reduction

This category has existed since the early 1980s, but until the 99-01 biennium funding has been limited. Developments built prior to 1977 which are sensitive to noise and adjacent to State highways have been inventoried. These locations are entered in PATS. Developments built after 1977 are not listed in the inventory. That is because since 1977, FHWA has funded a program for noise retrofit and made states responsible for mitigating noise sensitive locations in conjunction with new construction projects. WSDOT's retrofit locations are prioritized based on a B/C ratio. The ratio is calculated by dividing the noise mitigation benefit that a development would receive by the cost of the mitigation.

Policy Implementation

The Environmental Affairs Office (EAO) coordinates the department's environmental policy direction in such fields as endangered species, hazardous waste, stormwater, mitigation, cultural resources and consultant support. EAO provides statewide leadership for innovative solutions to complex environmental problems to support regional project delivery and provides accountability to the Legislature, Governor's office and Transportation Commission on current and future environmental needs affecting transportation services.

Building the Program

The highway construction program is composed of many projects in various stages of development and funding approval. The basic building block for the new book is the projects that are commitments in the current book and will continue into the next biennium. These "carryforward" commitments represent both dollars and workforce expenditures into the next biennium. The book building process starts with these projects. The Regions must review the current program of projects and determine the risk of project delays and cost overruns in the current biennium plan that might affect the next biennium. Close coordination with both the Project Development Engineer and the Construction Engineer must be maintained to ensure that projects under development and under construction are accomplished as planned in the current biennium.

Building on this foundation, new project phase starts are added based on Department policy and Commission direction. These new project starts represent needs that are identified in the Highway System Plan. The first step in adding new projects to the book for the next biennium is to estimate the funding targets for each category of work within each subprogram. Once OSC has provided the target funding levels, the Regions can begin to assemble the new book. The Region Program Management offices will solicit input from stakeholders on

proposed projects for inclusion in the Legislative Book. This input can help program managers decide on tradeoffs in solving identified deficiencies which have similar priority. It is important to remember that Regions can't propose a project unless a need has been identified in PATS.

After the new projects have been selected and the carryforward projects identified, the program of projects is developed and the project data is input into CPMS for balancing to the target allocations for both dollars and workforce (FTEs). Then project summaries are developed. The program of projects is shared with Region executives and their input is incorporated. Adjustments are made to ensure that the program can be accomplished within the constraints of available workforce and facilities in the Region. At this time provisions are made to allow for the use of consultants to provide additional capabilities for program delivery. Also, Regions can agree to share work, facilities, and staff as necessary to accomplish the work planned for future years. The program needs to be assessed for any special needs to accomplish it. Throughout this process, on-going communication must be maintained with OSC Program Management for feedback related to program direction and other Department policy including changes in funding levels due to revenue changes and emergent needs in other Regions.

After the target allocations have been received from the OSC, the Regions complete the program of projects for each subprogram. The program is again reviewed for compliance to legislative intent, system plan needs, and the Region's ability to deliver the program. The CPMS file is then updated in preparation for copying project data to a draft book report. Some minor revisions and final adjustments may be made by OSC to reflect current funding conditions. The final book data is then copied to a special file and the Legislative Book is formatted and readied for submittal to the Commission.

Programming Instructions

Each biennium, OSC Program Management develops instructions for the program managers to follow when programming projects for the Legislative Book. The programming instructions provide guidance on specific requirements for the biennium and include target allocations so Regions know what funding levels the program will be built to in each subprogram. The following pages provide general information about how projects should be programmed in any biennium.

For programming instructions for the current biennium, see:

- http://www.wsdot.wa.gov/ppsc/pgmmgt/program/default.htm

General Guidelines

RCW 47.05 requires that an investment plan be developed for the six-year highway construction program. This investment plan must consist of projects

shown in full detail for the first two years of the six-year program and a financial plan detailing the needs for the remaining four years. The Legislative Book is developed to satisfy the requirements of this RCW. The Legislative Book consists of projects sorted by State Route and Milepost showing the project title, description, location, and planned start dates for preconstruction (PE and RW phases combined) and construction. An expenditure plan for each phase per biennium is displayed. The total project costs include future expenditures only and do not include prior expenditures.

All of the project data presented in the Legislative Book comes from CPMS. Therefore, it is critical that all data elements be loaded into CPMS accurately. The Legislative Book is distributed to each legislator, the Transportation Commission, and the LTC staff. It also is available to the general public and to the media. With this wide distribution, it is important to make sure project details are accurate as any errors in the data are likely to be discovered.

Any deviation from the programming instructions, priorities, procedures or allocations must be discussed with OSC Program Management prior to proceeding with development of the program. This is necessary to ensure consistency and a complete understanding of the program. OSC Program Management presents the completed program to the Commission, the LTC, and the Legislature. Regions need to make sure the people presenting the program understand the decisions that went into its development.

Every effort is made to maintain carryforward into the following biennium at a reasonable level while maintaining delivery of system plan objects. Large carryforward reduces the Department's ability to start new projects in future biennia by committing available revenue. Also, excessive carryforward can make program adjustments difficult to implement. Particular attention should be directed toward minimizing the amount of carryforward using state funds.

Project Summary

Regions need to place special emphasis on project scoping, estimating and scheduling during program development to ensure program delivery stays within appropriated dollars and workforce. Regions should use the Highway System Plan, the Design Matrix, the Roadside Classification Plan and other planning, design and environmental documents to ensure project scoping is consistent.

The project summary is developed in the Region as a project is proposed for programming and is based on actual field conditions with recognition of how the project costs affect the remaining program. The project summary defines what has been agreed to by OSC and the Region regarding the scope of work. It also documents the design decisions made while determining the project scope. The project summary must be as complete and accurate as possible. The intent of this agreement is to identify the need that has generated the project and the proposed

solution that will solve that need. The project summary must be approved prior to beginning work on a project.

The environmental section of the project summary establishes the initial environmental classification and documentation required for the project. Environmental classification at the project summary stage has several benefits. It helps in understanding the impacts associated with a project and it helps to establish a realistic schedule and PE cost estimate. All projects must have supporting State Environmental Policy Act (SEPA) documentation. National Environmental Policy Act (NEPA) documentation is also required for all projects that are eligible for federal funding.

Regions should take full advantage of expertise available from the Olympia Service Center, FHWA, the Environmental Office, and local agencies when scoping projects to ensure that all aspects are considered and that the proposed solution is eligible for available funding. These resources can help the Regions evaluate a project's impacts and provide the appropriate project direction.

Program Management coordinates review of the project summary by all service centers and forwards any comments to the Regions for resolution prior to approval. Once all comments and outstanding issues are resolved, the project summary can be approved and copies distributed.

Advance Engineering

In order to ensure delivery of the highway construction program, some advance engineering projects are included in the Legislative Book and programmed in the first biennium. If unanticipated delays occur on programmed construction projects, the advance engineering projects may be used as a substitute without additional action by the Secretary of Transportation. Also these projects may be advanced if additional funds become available.

Advance engineering projects are scheduled in CPMS with a PS&E ad-ready date no later than the middle of the first biennium. The construction start date is scheduled in the biennium when the project will begin construction given the current funding forecast. Construction expenditures for advance engineering projects are programmed in a future biennium and aged in conjunction with the scheduled ad date.

Prior to proceeding with construction of any advance engineering projects, the Region should contact the OSC Program Management office for approval to proceed with the project.

Setting Program Targets

Each biennium, the OSC Program Management Office sets programming targets for Region program managers to use when building the Legislative Book. A programming target is an estimate of the allocation amount that will be available to a Region within a given subprogram. With this amount in hand, Regions can determine which high priority projects as identified in PATS to include in the biennial program. The following pages explain how program targets are developed and identify some of the issues considered.

General Objectives

The six-year financial plan provides subprogram totals by state, federal and local fund source for each of the three biennia included. The biennial totals by subprogram are developed based on Highway System Plan distributions and Transportation Commission priorities. Local amounts shown in the plan are estimates only and can be adjusted as needed.

Programming targets are developed by referring to the system plan information to determine the distribution of available revenue. Program levels included in the financial plan include all available revenues. Prior to distributing targets to each Region, any amounts included in the financial plan which will not be distributed by highway system plan formulas are excluded and later added to the appropriate Region target. Examples of these types of funds are bond proceeds or dedicated revenues included in the financial plan for a select group of projects.
Each subprogram typically includes bucket projects for support and other recurring activities. Funding for these projects or activities is included in the financial plan. These amounts should be removed from available revenues prior to distributing targets to the Regions and then added to each Region's target.

Statewide Targets

With some subprograms, the process for setting targets is not done by system plan formula but is determined by prioritizing statewide needs and evaluating each Region's ability to deliver projects. This process is used for both subprogram P2 and P3. For example, in subprogram P2, needs are prioritized on a statewide basis and schedules developed for each project. Schedules may be adjusted if anticipated expenditures do not match the revenues available. Targets for each Region are then developed from the proposed schedules.

Work in Progress

A review of work in progress needs to be made prior to distributing targets to verify that work in progress does not exceed the planned target for any region and/or subprogram. When work in progress exceeds the targets, further investigations need to be made to determine if an error in the calculations was

made, if the distribution needs to be adjusted to accommodate higher than expected work in progress, or if some costs included in work in progress should be considered new starts.

When fund source targets are developed, fund splits by federal and state sources need to cover work in progress and provide a reasonable split for new starts. Usually, targets for local funds are not included in targets provided to the Regions for program building. Targets can be adjusted to cover local funded projects loaded into CPMS by the Regions.

Identifying Fund Sources

There are three primary fund sources used in program building: federal, state, and local. Federal funds, as used here, refer to financing provided through a federal-aid program established by Congress and administered by the Federal Highway Administration (FHWA). State funds refer to revenues collected by Washington State and include the Motor Vehicle Fund (MVF) and the Transportation Fund (TF). Local funds refer to financing provided by local agencies within the state. These may include funds from cities, counties, ports or other public or private sources. Federal funds that come to WSDOT through local agencies or through federal agencies other than FHWA are categorized as local funds in CPMS.

Federal Funds

Federal funds used by the Department in the highway construction program come from the federal-aid highway program administered by FHWA. It is a reimbursable financing program specifically for state highway projects. Under the federal-aid highway program, FHWA provides funding but allows the state to decide which roads will be improved and who will do the construction work. The federal-aid highway program is a state/federal partnership. This program provides for construction and preservation of the National System of Interstate and Defense Highways (90% Federal – 10% State) and the improvement of other federal-aid roads (80% Federal – 20% State). As existing sections of the federal-aid highway system deteriorate, certain repair, reconstruction, and rehabilitation projects become eligible for federal-aid.

Each year, FHWA makes funds available to the states according to formulas determined by Congress. WSDOT establishes priorities in concert with local officials through the metropolitan and statewide planning processes. The planning process culminates in an approved Statewide Transportation Improvement Program (STIP) documenting which projects will be developed within funding limits. Under the federal-aid program, WSDOT is responsible for coordinating project planning, design, and construction with local agencies. If the Department decides to develop a project using federal funding, FHWA provides technical assistance and approvals at key stages to make sure the project meets applicable federal requirements, such as the National Environmental Policy Act (NEPA).

Under the federal-aid program, the federal government reimburses WSDOT for costs actually incurred on projects. The authorized amounts distributed to WSDOT represent lines of credit which the Department can draw upon as federally-assisted projects are advanced. This is in contrast to a grant program where the federal government issues a check up front for the entire estimated cost of a project.

Funding for highway projects is drawn from the Highway Trust Fund which was created in 1956. Revenue for this fund is derived from dedicated highway user fees such as taxes on fuel, tires, and truck sales. Trust fund dollars are distributed or apportioned to each state according to formulas established by federal legislation. These formulas are based on various factors such as lane miles, vehicle miles of travel, population, historic levels of funding, and the state's share of receipts in the Highway Trust Fund.

The current legislative authorization for the federal-aid highway program is the Transportation Equity Act for the 21st Century (TEA-21) passed by Congress in May 1998. This legislation provides authorization for federal aid to highways and transit programs for the six-year period from October 1, 1997 through September 30, 2003 (federal fiscal years 1998 through 2003). The federal-aid fund types that can appear in the state's highway construction program include: Interstate Maintenance (IM), National Highway System (NHS), Surface Transportation Program (STP), Highway Bridge Replacement and Rehabilitation Program (HBRRP), and Congestion Mitigation and Air Quality (CMAQ). Congress can also designate funds to specific high-priority projects in the authorization bill or in the annual USDOT appropriation. See Appendix F for additional information about federal fund types.

State Funds

State funds are established from revenues collected by Washington State. Three principal state-imposed and state-collected sources of revenue are available to fund transportation in Washington: motor fuel taxes (especially gas taxes); licenses, permits, and fees for using the transportation system; and the Motor Vehicle Excise Tax (MVET) based on vehicle value. With the passage of Referendum 49 on November 3, 1998, about three quarters of the MVET proceeds are being used for transportation purposes. The gas tax is a flat tax that has not changed to match inflation. The Legislature periodically passes increases to this tax to fund highway construction.

For details about the distribution of MVET taxes, see

- http://www.wsdot.wa.gov/fasc/keyfacts/keyfacts.pdf

State revenues are deposited into the Motor Vehicle Fund and the Transportation Fund. These funds are appropriated to the Department along with federal and local funds in the biennial Transportation Budget Bill passed in the odd years by

the Legislature. Supplemental budgets may modify the biennial budget in the even years. Legislative appropriations in these budget documents are provided for preliminary engineering, right of way acquisition, and construction work in the highway construction program. Further conditions and limitation on the use of state appropriations may be specified in the text of the budget document. State funds may also include bond proceeds. Bond funds typically are appropriated for a particular program or particular group of projects such as the SR 18 corridor in King County.

Local Funds

Local funds are reimbursements for work done on the state highway system from sources other than the Motor Vehicle Fund, the Transportation Fund, or the Federal Trust Fund. Examples of sources for these funds are local agencies such as cities or counties or funds received directly from a developer. All projects which plan to use local funds must have the appropriate finance codes entered into CPMS to identify the funding levels expected from the local source.

Selecting a Fund Source

Modified November 2000

A primary goal when developing the highway construction program should be to utilize all available external sources of funding anticipated being available for the highway programs. External sources include federal and local funds. The level of local funds available is dependent on Developers, Cities and Counties willingness to participate in state highway projects. Annual obligation authority controls the level of federal funding available to WSDOT programs.

When programming projects for federal aid, federal funds with the least flexibility should be considered first for project funding. Interstate Maintenance funds are the least flexible of the federal funds utilized in this program and should be used whenever possible for projects programmed on the Interstate system. National Highway System funds can only be utilized as a funding source for work on the National Highway System, which includes the Interstate. Work on all routes can be funded from the Surface Transportation Program or state funds. In order to minimize the amount of paperwork processed to FHWA, it is preferable to concentrate the use of federal funds on high cost projects and, to the extent possible, to finance low-cost project phases using state funds.
Included in the biennial programming instructions OSC will provide guidance regarding federal fund source selection criteria indicating by program thresholds by phase and federal funds source.

The regions code projects in CPMS as either eligible for federal funding or as funded with federal funds consistent with the programming instructions. OSC will review the program on a statewide basis and balance OA, federal appropriations and available state funds. Once this review is complete the regions will be asked to modify the proposed funding on selected projects.

Hazard elimination projects on all federal-aid routes are eligible for 100% federal funding. State matching funds are not required for the eligible portions of qualifying work. However, a small amount of state funds are required on these projects to fund non-participating charges to the project. The amount programmed for nonparticipating charges should be 1% to 2% of the project cost. Qualifying work generally consists of traffic control signalization, pavement marking, traffic sign installation, guardrail installation, concrete barrier end treatments, and break away utility poles.

Combining several federal, state, and/or local appropriations on a given project should be avoided whenever possible, although on some cooperative projects this may not be possible. Multiple federal fund sources on a project can complicate fund management and tracking, and make accurate reporting difficult. However using local or developer mitigation funds as a match for federal funds is encouraged whenever possible.

OSC Program Management can also provide assistance in determining project eligibility and identifying appropriate federal funds to use on any given project.

Entering Project Data in CPMS

As the individual projects within the proposed program are identified, project data needs to be entered or updated in CPMS. The following pages provide general guidelines to follow when entering this data.

- Any project with a phase start in the first biennium must be fully defined in the CPMS production file with cost, schedule and workforce data.

- All projects included in the proposed program must be included in the financially constrained highway system plan.

- All projects which plan to use federal funds and all regionally significant projects need to be included in the Statewide Transportation Improvement Program (STIP) prior to beginning any phase.

- The relationship between Program Item Number (PIN) and Work Item Number (WIN) should be kept as simple as possible. One PIN to one WIN should be standard except where multiple subprograms are involved.

- Accurate aging of project costs should be maintained. The Department measures its performance by comparing planned to actual expenditures every month throughout the biennium. If aging of planned expenditures is overly optimistic and the plan is underspent, it may be necessary to explain the reason to Department executives.

- Realistic phase start dates should be set. The ad date marks the start of the construction phase is used to measure project delivery. Deviations from this date may need to be explained to Department executives, the Commission, or the Legislature.

- The CPMS file must be in balance to the current and future biennium's allocations prior to lockup of the program.

- OSC Program Management provides each Region with programming targets in all subprograms, with fund source allocations broken down by federal, state and local. Local allocations are developed by each Region based on the Region's program allocations.

- Bucket projects must use approved titles and numbers. These standard numbers must be used to ensure statewide consistency of a defined portion of the program. If it is necessary to set up a new bucket project, submit a request to OSC Program Management for a new bucket project number. When programming bucket projects not defined in the programming instructions, contact OSC Program Management to determine what number to use.
- Project descriptions must be entered in CPMS on the PX screen. Descriptions entered on this screen are printed in the Legislative Book for informational purposes. There are generic descriptions that can be loaded onto the PX screen with minimal effort. If the generic descriptions are not appropriate for a given project, enter the appropriate description on the PX screen. Make sure spelling and punctuation are correct.

- System plan deficiencies addressed by each project must be entered in CPMS on the DS screen.

- Proper approval and program status code combinations should be used so that projects are identified appropriately and can be tracked. The codes to use in Book Building are included in the biennial programming instructions.

- Preservation projects of less than $10,000 in carryforward and improvement projects of less than $30,000 in carryforward into the next biennium are not shown in the Legislative Book. They should be coded with approval code A (administrative).

- Projects that have multiple WIN phases with differing funding statuses on given stages require additional codes to be entered on the cost screens in CPMS within the stage of estimate field. The codes to use in Book Building are included in the biennial programming instructions.

If Regions have questions about what coding to use in CPMS for a given project, they should contact the OSC Program Management office for assistance.

Reviewing the Program

The proposed program of projects in each Region is given a comprehensive review to ensure the program meets the objectives for each subprogram. These reviews are coordinated between the Region and OSC Program Management Offices. The schedule and agenda is distributed prior to the meeting to allow time for adequate preparation of reports and supporting data by the Regions.

Usually, the review is scheduled as an on-site visit to the Region by the OSC program managers towards the end of the new program development cycle. The review provides an opportunity for team building, information sharing, and coordination of the overall program. It functions as a double-check that the needs and the solutions are in balance. The review is made by subprogram and usually consists of a discussion of the proposed program and how it addresses the service objectives identified in the Highway System Plan.

Specific project details are rarely discussed as the higher level summary of the subprogram is what is important. Areas where the program deviates from system plan priorities need to be explained by the Region to ensure that OSC program managers fully understand the decisions that led to the development of the Region's program. The information gathered at the review is often used by OSC to answer legislative questions at a later date. After the reviews have been completed in each Region, corrections or updates may need to be made in the project data in CPMS. Then, the overall statewide program is ready to be compiled for submittal to the Commission for review and approval.

Approving the Program

After the highway construction program has been given a comprehensive review, it is presented to the Commission for review and approval and from there to the Legislature for review and approval. The document used to present the proposed program of projects to the Legislature is called the Legislative Book.

Creating the Legislative Book

The Legislative Book shows all the projects proposed for inclusion in the highway construction program. It shows the project title and location, start dates for preconstruction (PE and RW phases combined) and construction, and an expenditure plan for each phase within each biennium. All of the project data presented in the Legislative Book comes from CPMS.

To create the Legislative Book, a copy of the entire CPMS Production database is made and moved into what is called the Book environment. A number of reports are used to make sure that data in CPMS has been entered correctly and that data matches in the Production and Book environments. These reports check for errors in approval codes, phase start dates, and expenditure aging plans.

While this verification process is going on, if a change needs to be made to the project data in the Production environment the same change must be made to the project data in the Book environment so that the data continues to match. Regions can update data in the Production environment but only OSC Program Management can update data in the Book environment. Once all project data has been verified or corrected, the Legislative Book is printed from data in the Book environment.

Commission and Legislative Approval

The Legislative Book is submitted to the Commission for review and approval along with the budget proposals for the Department's other programs. As part of the review process, the Commission holds work sessions with the managers of all programs to develop an understanding of what work is included in each. Following these work sessions, public hearings are held to gather input on the proposed budgets. The Commission considers the different input and then makes a final decision on what to include in the budget. The approved budget is sent it to the Legislative Transportation Committee (LTC) for their review and action.

The LTC is comprised of members from both the House of Representatives and the Senate. The LTC conducts studies and provides oversight for transportation agencies when the Legislature is not in session. During the legislative session, the House and Senate committees conduct their business separately, which includes developing the budget.

One of the committees will begin the budget review process by holding a series of public hearings to gather comments on the budget as proposed by the Commission. While these hearings are underway, the committee staff will review the current revenue forecast to confirm if there is sufficient revenue to cover the budget proposal. Either Committee has the authority to revise the amount of funds requested by the Commission in any category of the Highway Construction Program. The committees will publish project lists that may include additional projects or exclude projects that were proposed by the Commission.

Ultimately, one of the committees will approve a proposed budget bill and send it to the floor for the entire chamber's review and approval. Following approval of the bill, it is sent to the other chamber's transportation committee for review. The other chamber's committee can accept the budget proposal as is, modify it, or submit their own proposal in its place. If the budget bill passed by one chamber differs from that passed by the other chamber, the final bill is sent to a conference committee where the differences are resolved.

Once the budget bill has been passed by both the House and Senate, it goes the Governor for signature. The Governor has 10 days to review the bill. He or she can sign it as is, veto certain line items, veto the entire bill and send it back to the Legislature, or take no action and let the bill become law after 10 days.

Commission Resolution to Advance Preliminary Engineering and Construction

For the last several biennia, the Department has requested passage of a Commission resolution to authorize, where practicable, the early commencement of PE, RW, and CN for projects included in the Legislative Book. This approval allows the unimpeded continuity of project activities through the pre-biennium early construction season. The approval applies only to those projects funded under current law and is subject to the availability of funds.

Work orders for preliminary engineering may, with passage of the resolution, be set up with the PIN in the Legislative Book for the amount in the current law budget. Advance PE buckets should be reduced by the anticipated biennial expenditures. Approval authority for the work orders remains with the OSC Office of Program Management, and it anticipates that project summaries have been submitted for the requests to advance preliminary engineering work.

The intent of including advance CN in the resolution is to avoid Screening Board and subsequent Secretary or Commission approval for projects advertised for bids during the pre-biennium winter and spring. It is recognized that many of these projects will have little or no expenditures until the next biennium; any exceptions will be based on funding availability.

Implementing the Approved Program

Once the final transportation budget has been passed, final allocations for each subprogram within the improvement and preservation programs are made and the final program of projects for the biennium established. OSC Program Management works with the Budget Office and others to distribute the legislative authorization, which is made at the program level, into separate allocations for each subprogram. Final allocation amounts for each subprogram are communicated to the Regions so they can make any adjustments necessary. These adjustments can affect the planned new starts for the new biennium.

Creating the Operating Book

Once all the necessary adjustments have been made, another copy of the entire Production database is made and moved into the Book environment, replacing the Legislative Book data already there. Reports are again used to check to see that codes have been entered correctly and that data in the Production and Book environments matches. If a change needs to be made to the project data in Production, the same change must be made to the project data in Book so the two environments continue to match.

Once all project data has been verified and corrected, the Operating Book is printed from the data in the Book environment. The Operating Book establishes

the final list of approved projects for the biennium. It establishes a baseline for schedules and costs which are used to measure delivery of the program. It is sent to the Transportation Commission for review and approval.

Adjusting the Program

Throughout the biennium, the approved program of projects is constantly monitored and adjusted to compensate for project schedule and scope changes made during the biennium. Those projects which are scheduled to go to ad during the biennium are tracked to make sure they stay on schedule. This requires close cooperation and coordination between the Program Management and Project Development offices in the Regions.

In the even years, the Legislature meets again and may make adjustments to the highway construction program either by proviso or by passing a supplemental transportation budget. If either of these happen, new projects may need to be added to the program or existing projects modified. The Operating Book as originally established near the beginning of the biennium is not changed but additional projects may need to be monitored as part of the overall program.

Chapter 3: Managing Project Funds

Overview

Work can begin on individual projects within the highway construction program when project funds are authorized. Funds can be authorized at any point during the biennium provided the project has been programmed. This is done using what is called a work order authorization. A separate work order authorization is required for each project phase: preliminary engineering (PE), right of way (RW), and construction (CN). A standard form is used to submit the initial request for authorization, to make modifications, and to close the work order. This form is an important tool for managing project funds. Special care needs to be taken to make sure the form is submitted in a timely manner, is completed accurately, and provides clear information.

If a project plans to use federal funding, a Federal Aid Project Agreement is needed to establish a commitment from the Federal Highway Administration (FHWA) to participate in the project costs. The Regions provide the information necessary for submitting the agreement and the Olympia Service Center (OSC) prepares the final form and submits it to FHWA for approval. Usually, Regions submit the request for work order authorization at the same time they submit information for the federal aid agreement. The federal aid agreement must be approved before work starts on a project phase which will use federal funds.

Once project funds are authorized, work gets underway and charges come in against the work order. As expenditures are incurred, they are posted in TRAINS against an appropriation code. A nightly process translates the expenditures by appropriation code into expenditures by finance code in CPMS. The finance code is used in CPMS to track actual work order expenditures, to determine remaining expenditures, to establish the monthly aging plan for how dollars will be spent, and to redistribute planned expenditures over the remaining months of the project during the monthly aging process.

Program Management tracks project expenditures, adjusts monthly aging plans, and submits work order modifications as necessary. This monthly monitoring of project expenditures is very important; it is much like balancing a checkbook. By law, the Department cannot spend more than its biennial appropriation for each subprogram. Program Management continually monitors and summarizes project level expenditures to make sure expenditures at the subprogram level stay in line. The goal is to make the most efficient use of the subprogram funds to accomplish as many individual projects as possible. Region and OSC Program Management work together throughout the biennium to help achieve this goal.

Preparing and Modifying Work Orders

The Work Order Authorization (WOA) form is used to submit new work orders, modify existing work orders, and close work orders. See Appendix C for a sample of the form and instructions on completing it.

The following pages provide information to assist Regions in understanding the use of this form. Submitting an incomplete or inaccurate WOA form can delay starting a project phase, authorizing additional funds, or closing of a project phase. Such delays can ultimately affect a Region' s ability to deliver its portion of the highway construction program.

Background Information

The work order authorization process provides funding for preliminary engineering, right of way acquisition and construction of all projects within the highway construction program.

A work order authorization is used for:

- Setting up initial project phase funding
- Increasing or decreasing project phase funding
- Setting up payable or reimbursable agreements on project phases
- Transferring funds within a work order
- Correcting inconsistencies between computer systems (synchronizing work order setups between systems)
- Adding other program funds to highway construction projects (for example, adding maintenance funds from Program M)
- Exchanging funds (for example, if a project receives local or developer funds after getting underway, the funds from this new source can be added and funds from another source can be reduced accordingly)

The process of setting up a work order can involve several computer systems: the Capital Program Management System (CPMS), the Transportation Reporting and Accounting Information System (TRAINS), and the Contract Administration and Payment System (CAPS). TRAINS is the core system used for storing and managing expenditures. CPMS and CAPS are also used to manage and track work order data. CAPS data is fed to TRAINS for payments made to contractors. TRAINS expenditure data is sent to CPMS every night.

When to Submit a Work Order

- To set up initial funding for a project phase. Be sure to submit the form well enough in advance of the phase start date to allow adequate time for processing. See the heading "Setting up a New Work Order" for details.

- To increase or decrease an existing work order. Be sure to submit the form prior to incurring cost overruns.

- To set up payable or reimbursable agreements on project phases. Be sure the agreements have already approved been set up in TRAINS.

- To transfer funds within a work order from one "group category" to another. (See the Chart of Accounts for an explanation of group categories.)

- To correct discrepancies between computer systems. Use the form to indicate what data needs correcting in CPMS or in TRAINS.

When NOT to Submit a Work Order

- More than 60 days in advance of the planned phase start date. Work orders are processed in the order they are received. Submitting a work order too far in advance can take attention away from a more urgent request.

- If final expenditures are within $10,000 of the authorized amount. A large number of projects have excess funds or are slightly overrun when the work is complete. In most cases, expenditures within $10,000 can be administratively reduced or increased without formal authorization. This is a grace amount in order to substantially reduce the number of work orders processed.

- To adjust to actual expenditures if agreements are still active and final payments or billings are not complete or if the work order groups are still open in TRAINS. If additional expenditures occur before the work order groups are closed, the work order will overrun.

Setting up a New Work Order

Project funding begins with the set up of the initial work order. Each project phase has slightly different elements to consider before submitting the first work order. For the PE and RW phase, the initial work order should be submitted to OSC at least two weeks in advance for state funded projects and four weeks in advance for federally funded projects. For the CN phase, the initial work order should be submitted to OSC at least four weeks in advance for both state and federally funded projects. This allows adequate time for approval and set up through the OSC Program Management and Accounting Offices.

Preliminary Engineering Work Orders

This is the first work order for most projects. This work order is used for all activities prior to construction with the exception of right of way acquisition. In some cases, this may be the only work order set up for a project as in the case of

planning studies or contributions to other agencies. The following items should be addressed before submitting the initial PE phase work order.

- Is the project programmed and in CPMS?
- Has the Project Summary been approved by OSC Program Management?
- Is the project design phase in the STIP (for federally funded and regionally significant projects only)?
- Have all agreements needed to start the project design been approved?
- Is the Project Design Office ready to begin design work on the project?

Right of Way Work Orders

This is usually the second work order set up on a project if there are right of way activities involved. This can also be the only phase on a project as in the case of contributions to other agencies. The following items should be addressed before submitting the initial RW phase work order.

- Is the project programmed and in CPMS?
- Has the Project Summary been approved by OSC Program Management?
- Is the project right of way phase in the STIP (for federally funded and regionally significant projects only)?
- Have the right of way plans been approved?
- Is the design and environmental documentation approved (i.e., design file and NEPA approval)?
- Are all agreements approved for on-call appraisal and negotiation services and/or reimbursable agreements from local agencies or developers in order to start the right of way acquisition process?
- Is the Region Real Estate Services Office ready to begin appraisal and negotiation services on the project?

There is one exception to some of the conditions above. Sometimes it is necessary to begin right of way appraisal work prior to the right of way plan, design or NEPA approvals in order to keep a project on schedule. In this case, it is okay to submit an initial RW work order for up to 10% of the total RW amount up to a maximum of $20,000.

Construction Work Orders

This is often the final and most important work order set up on the project. In some cases this may be the only phase of a project such as small maintenance projects or contributions to other agencies. The following items should be addressed before submitting the initial CN phase work order.

- Is the project programmed and in CPMS?
- Has the Project Summary been approved by OSC Program Management?

- Is the project construction phase in the STIP (for federally funded and regionally significant projects only)?
- Is the right of way secured and certified by OSC?
- Is the design and environmental documentation approved?
- Have all agreements needed to start the construction process been approved (these include, but are not limited to, service agreements, Washington State Patrol agreements, and local agency contribution agreements)?
- Is the project ready and scheduled for advertisement?

Biennial Work Orders

A biennial work order will authorize funds for only the two year time frame. Biennial work orders are typically administrative in nature; the AD or IP number may be used each biennium, but the work order authorization must be closed at the end of one biennium and re-authorized with the new biennium' s funding.

TRAINS will automatically zero all biennial work orders at the end of the 25th month. Any following expenditures on that work order will create an O-line in CPMS.

Modifying an Existing Work Order

All projects are unique and dynamic. As a result, it is often necessary to adjust work orders that have already been set up in TRAINS. Changes can occur to the project phase due to a variety of factors. Some of the more common reasons a work order may need to be modified are listed below.

- Insufficient design data at the time of project scoping
- New or revised requirements by other agencies
- Changes in state or federal laws
- Changes in design standards
- Community or local agency input to the project design
- Contractor claims resulting from unanticipated obstacles or project delays
- Changes in project scope
- Changes in project costs or financial needs

When a change occurs to a project phase as a result of one of these factors, the same items should be checked before submitting the work order as described previously in the Setting up a New Work Order section. In addition, several other items should be checked.

- If there are proposed changes in the scope, have these changes been approved by OSC Program Management or the Department Project Screening Board if required? (See Chapter 4 for details about approving project changes.)

- If additional right of way is needed, have the changes to the right of way plan been approved?
- If the total project cost increases exceed the Region approved threshold amounts, have these changes been approved?

The most important factor to keep in mind when modifying a work order is to provide clear and concise information and justification for the change. This information may be used when presenting the authorization to the Program Management Engineer or the Department Project Screening Board. If the authorization covers several contract change orders, provide the change order numbers, titles (or description), sub-program, and associated cost. Indicate if the work would result in a change to the contract beyond the original scope, intent or time. All Regions have different procedures for communicating changes along with some required formal processes prescribed by OSC. No matter what process is used, good communication is the key to success.

Closing a Work Order

When work on a project phase is done, the final step is to close the work order. The responsibility for closing a work order lies with the Project Manager and the Program Management Office. The closure process involves all those offices which participated in the particular project and phase. It is important to maintain good communication between all parties throughout the closure process. Before closing a work order, the Region should check the following items.

For the PE phase:

- Is the design work complete?
- If there is a construction phase involved, is the project awarded and all advertisement expenditures complete?
- Are all final payments or reimbursements complete for the associated design agreements (e.g., consultant or local agency agreements)?

For the RW phase:

- Are all right of way activities complete?
- Is right of way certified through OSC?
- Are all final payments or reimbursements complete for the associated right of way agreements (e.g., consultant or local agency agreements)?

For the CN phase:

- Are all construction activities complete?
- Are final payments and records complete?
- Are all final payments or reimbursements complete for all associated construction agreements (e.g., State Patrol, consultant, utility, or railroad agreements)?

Once these items have been addressed, the Region can initiate the work order closure. Each Region may have a different procedure for accomplishing this. In general, the Region will notify those offices involved with the work order that closure is planned. After this notification has been made, the Region Accounting Office will complete a Work Order Closure Form (see Appendix D) and send this form to OSC Project Support Services who will process the form and close the work order in TRAINS.

Closing the work order in TRAINS generates reports which are used to complete the closure process. One of these reports, called the Work Order Closure Report, is used by OSC Program Management to make final adjustments and initiate closure of the work order in CPMS. Another of these reports, called the Work Order Accounting Plan, is used by Regions to verify final closure and make sure that TRAINS and CPMS are in agreement.

It is important to remember that biennial work orders must be closed each biennium. The Region Program Management office may have to remind project managers to initiate this process; in some cases the Program Management office may be the project manager.

Sources for Work Order Data

When setting up, modifying, or closing a work order, it is often necessary to input data or review data in several computer systems and databases. The primary systems used when working with a work order are listed below. For additional information about these systems, see Appendix B.

- CAPS (Contract Administration and Payment System)
- CPMS (Capital Program Management System)
- EBASE (Estimate and Bid Analysis System)
- FIRS (Financial Information Retrieval System)
- Project Summary Database
- TRAINS (Transportation Reporting and Accounting Information System)
- TRIPS (Transportation Information and Planning Support)

Reviewing and Authorizing Work Orders

The Work Order Authorization (WOA) form should be reviewed for accuracy and completeness before it is submitted for processing. An incomplete WOA form will only delay the process and/or result in an improper setup in TRAINS. An improper setup can cause larger problems later on which may require extensive and time-consuming effort by both Region and OSC staff.

What Elements OSC Reviews

All work orders which require OSC processing, whether through OSC Program Management or OSC Project Support Services, must go through a formal review process. Each WOA type has a slightly different review process. When the work order is received, OSC Program Management determines what approval process should be followed for the WOA.

All work orders are given an initial review by OSC Program Management. During this initial review, the reviewer will consider such items as:

- Which phase the work order is for (PE, RW or CN)
- How the project is funded (state, federal, TIB or local)
- For federally funded projects, whether the project phase previously has been approved by FHWA on an SPES or STP Project
- What kind of work order it is (new setup, increase, decrease)
- What subprograms are included in the project
- Whether the project summary is approved
- Whether the documentation is complete

After this initial review, the work order is sent to the appropriate OSC Program Management staff person for a more detailed evaluation. During this second round, the reviewer will:

- Compare the WOA request to the approved book for each PIN. This is necessary to determine the appropriate level for approval. Adjustments which break certain thresholds require Department Project Screening Board approval.

- Review the documentation provided to justify any change in project cost or scope. This information is needed to document why project costs have changed from the approved book.

- Determine whether the request can be accommodated within the Region allocation by fund source and/or subprogram. Adequate allocation needs to be available for the Department to authorize planned expenditures.

- Determine if statewide adjustments in allocations are required to accommodate the request. If a request exceeds the Region allocation, the request may be accommodated by adjusting statewide allocations. Agreements to reduce one Region's allocation to accommodate another Region's cost increases will have to be made prior to approval of the work order.

- Determine if parcels are included on approved right of way plans for RW work orders. This is a requirement of the Real Estate Services Office with the intent of assisting the acquisition process by verifying that parcels are on an approved plan prior to acquisition.

- Check to see if the project scope is consistent with the approved Project Summary.

- Determine if CE on construction work orders is consistent with Department guidelines for projects of this type and size. If the CE is not consistent with Department guidelines, adequate documentation needs to be provided to justify the deviation.

- Determine if state force work for the construction phase conforms with RCW 47.028.030. This RCW limits construction work performed by state forces to $50,000.00. The Program Management Engineer cannot willfully authorize expenditures that violate state law.

- Make sure CPMS has been updated to include the request. This is necessary to verify that CPMS data accurately represents the project costs when compared to costs in the approved Operating Book.

- Make sure the work order is complete and accurate. This review is made to help reduce the number of errors occurring in TRAINS and CPMS data.

- Ensure all FHWA requirements have been met. This review is completed as part of the federal aid process.

Steps in the Review Process

The review process is slightly different for each type of work order that is processed. Figures 3.1 through 3.5 show the decision points and considerations made in the review process for the different types of WOAs submitted.

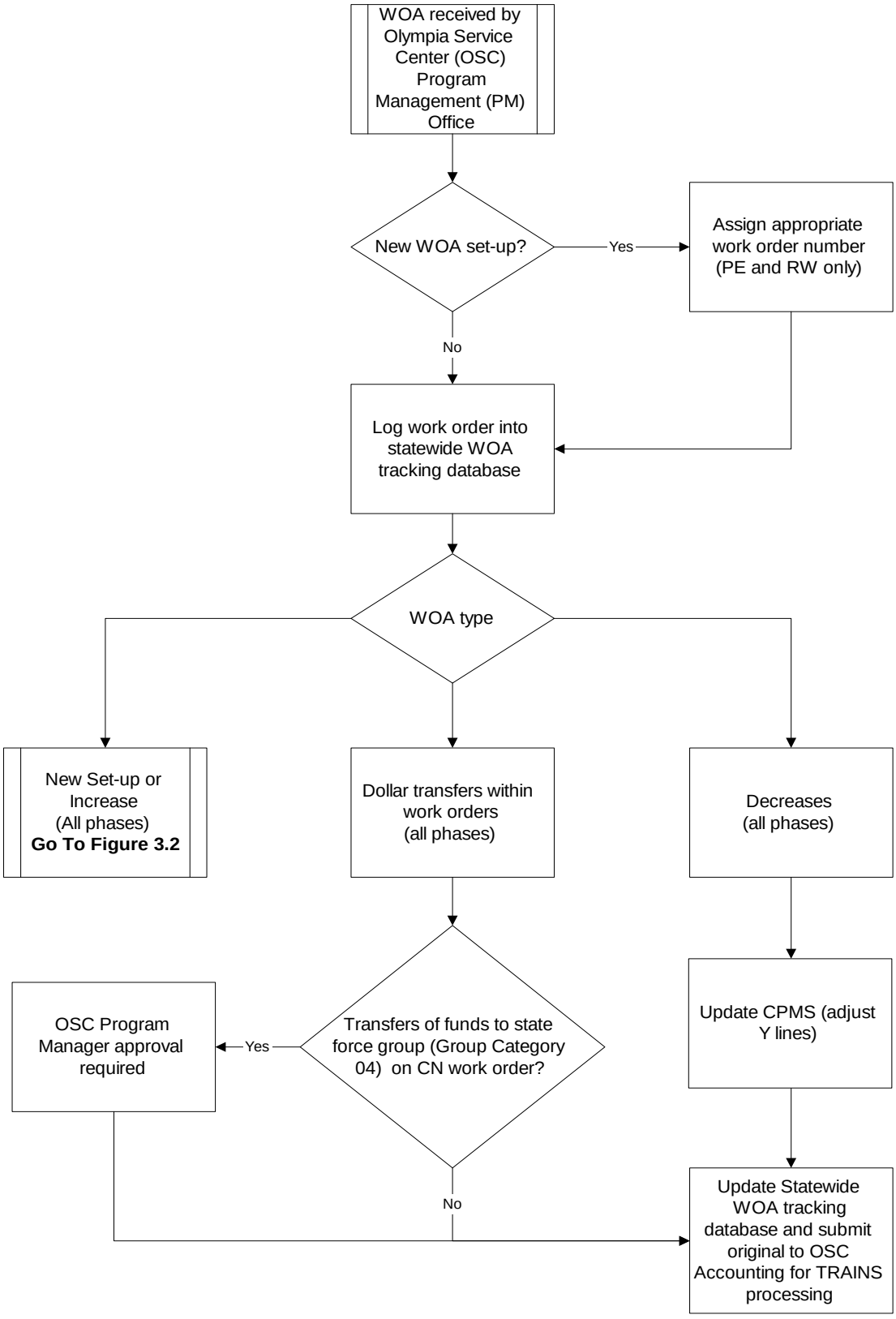


Figure 3.1 - Work Order Review Process (initial steps)

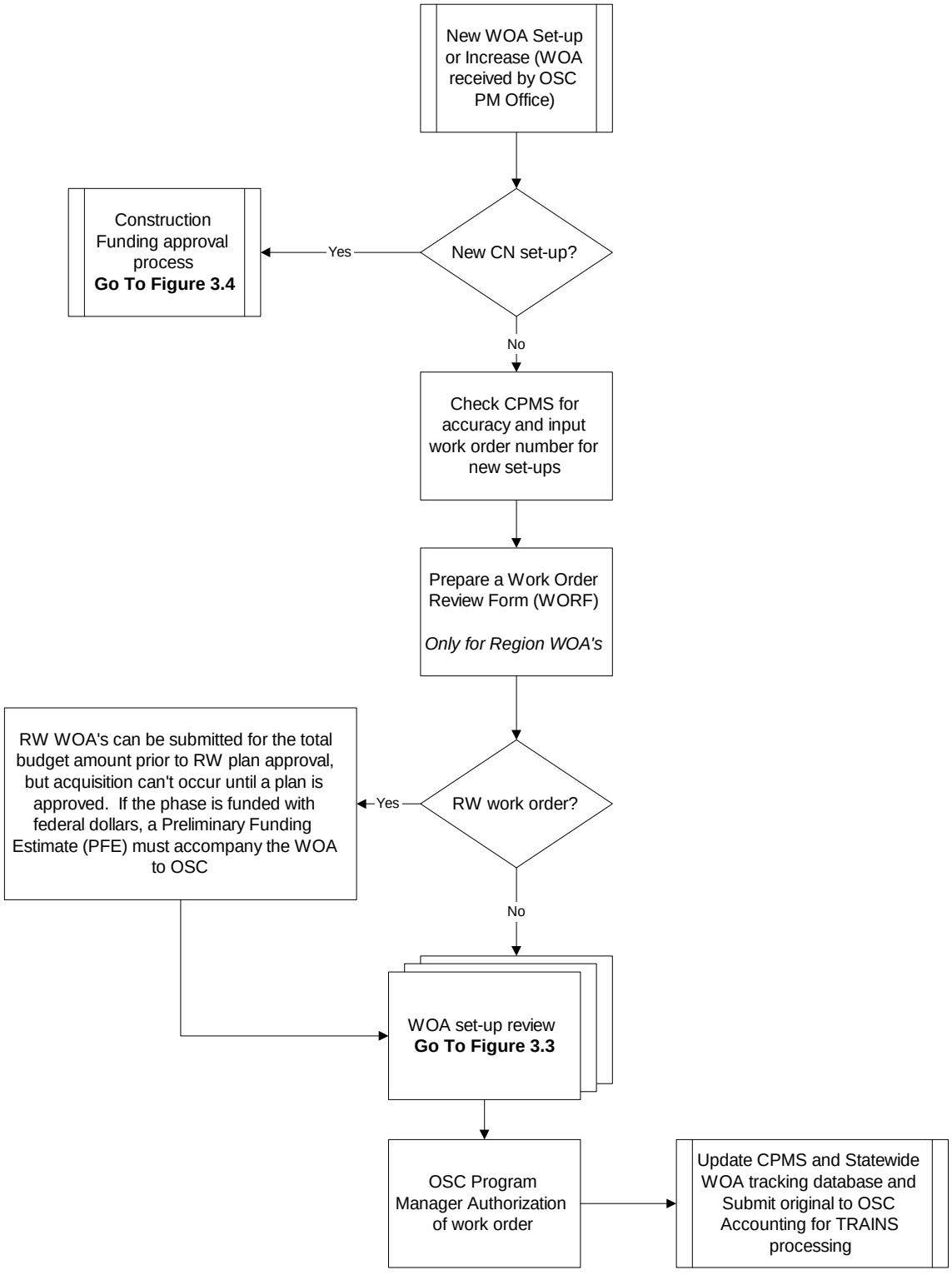


Figure 3.2 - Work Order Review Process (new setups/increases)

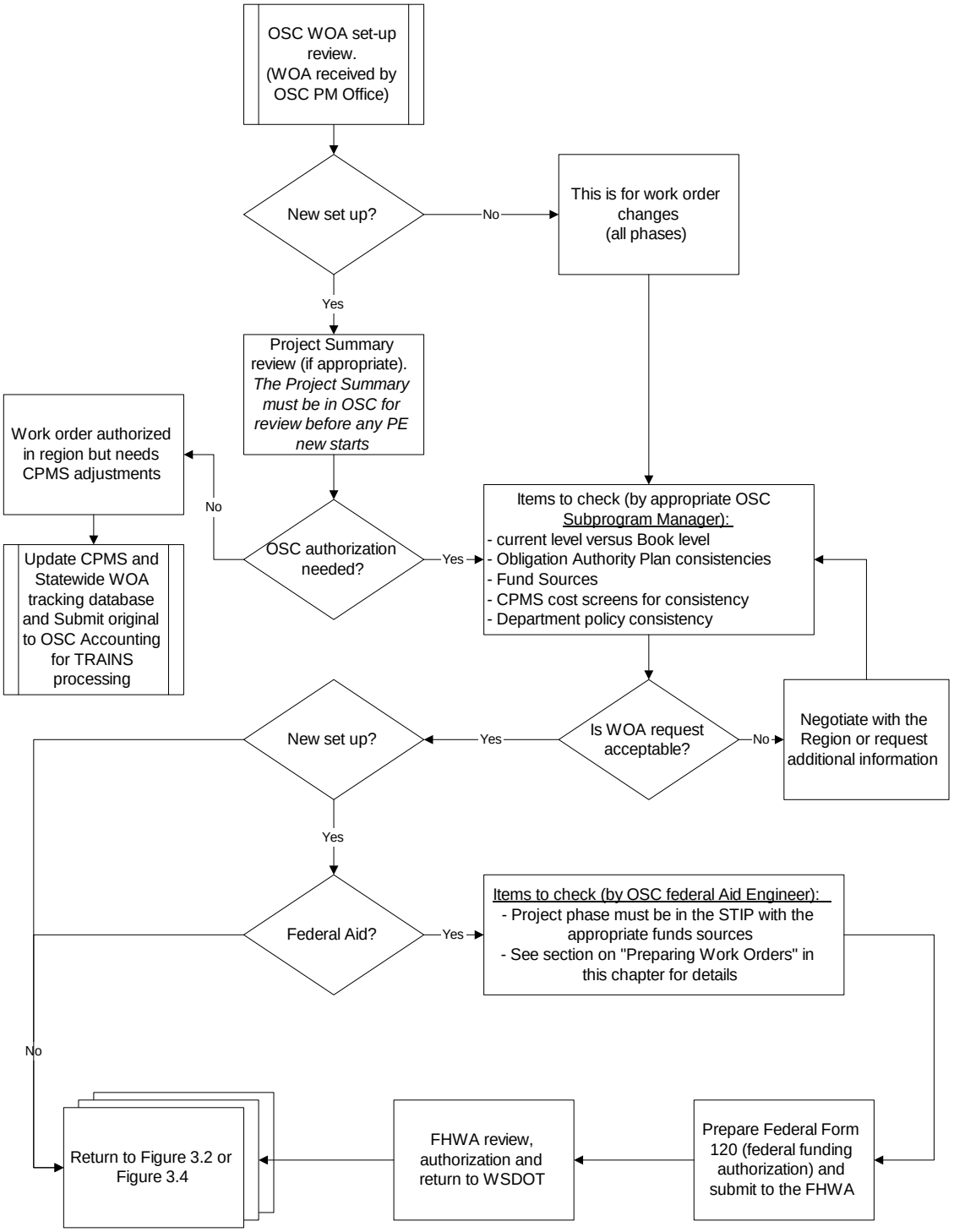


Figure 3.3 - OSC Work Order Review (new setups/increases)

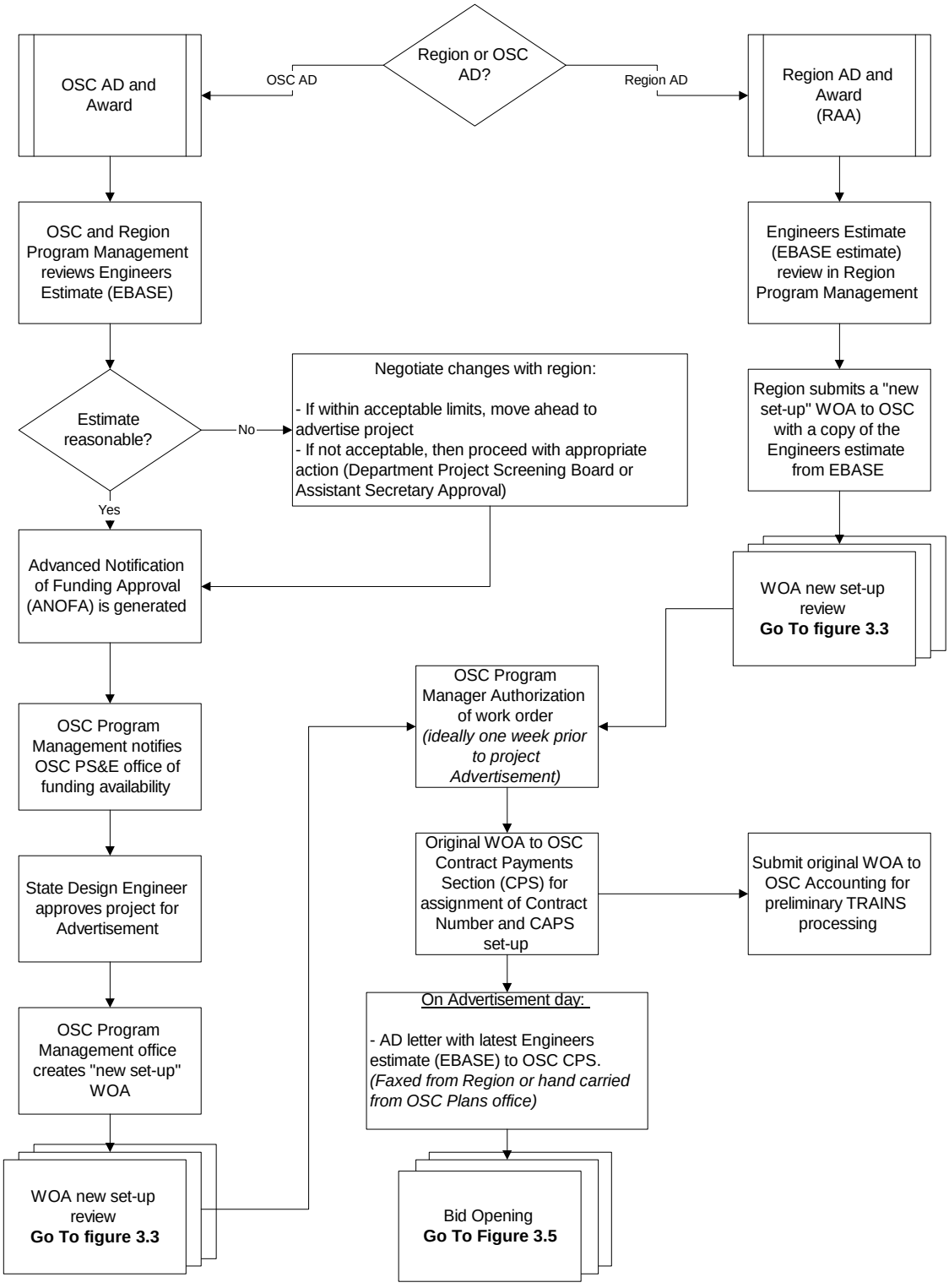


Figure 3.4 - Work Order Review Process (CN ad and award)

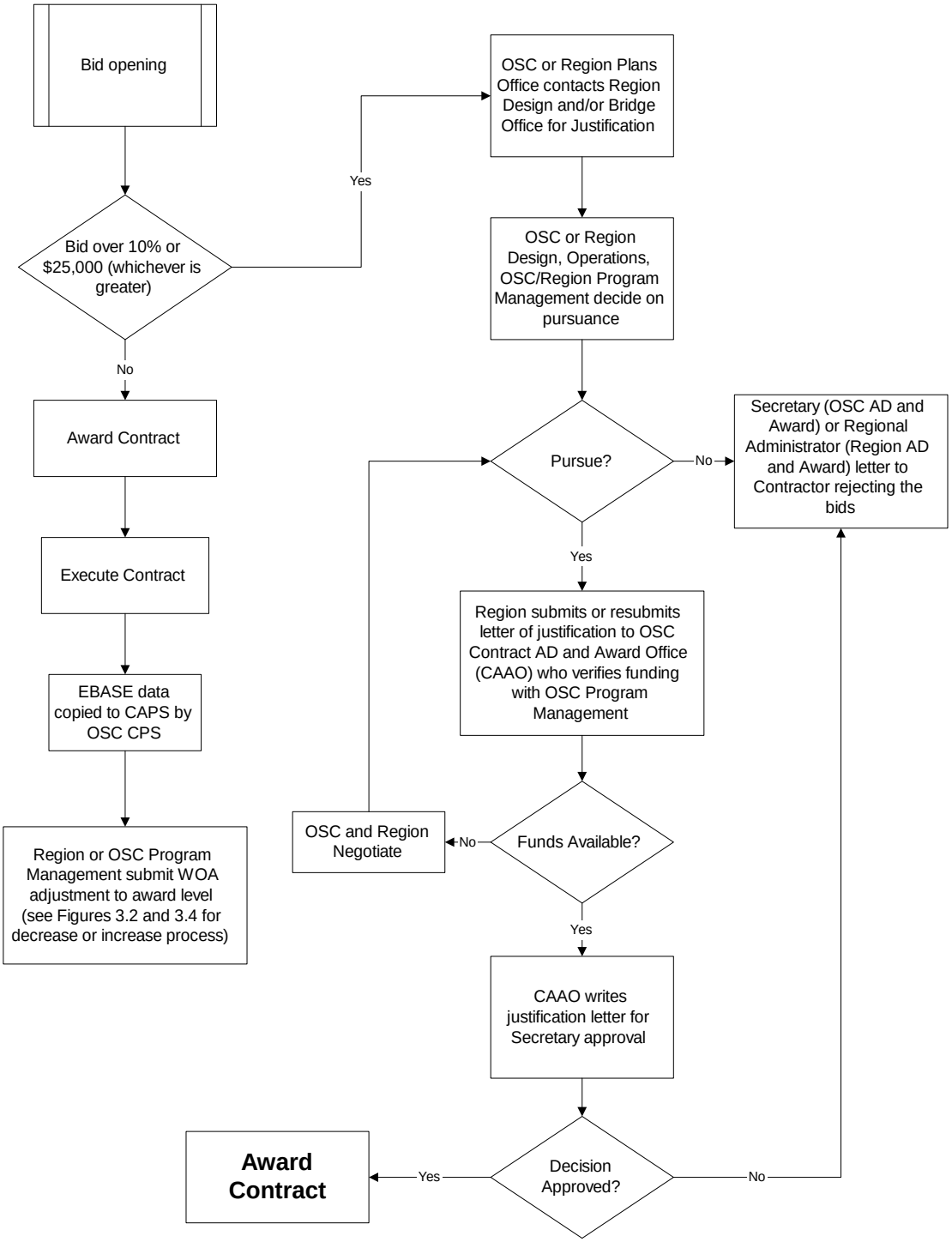


Figure 3.5 - Work Order Review Process (CN bid opening)

Who Can Authorize a Work Order

The following table shows the types of WOAs which can be approved in the Region and which must be approved by OSC.

Type of Work Order	Approval By OSC*	Region+
Initial Set-up		
State funded work orders within Book amount (PE only)		✓
Federal funded work orders (PE, RW and CN)	✓	
Early RW appraisals ($20,000 limit)		✓
RW acquisition (all projects)	✓	
Region emergent needs projects (PE and CN only)		✓
All other CN work orders	✓	
Increase		
State funded work orders within Book amount (PE only)		✓
Region emergent needs projects (PE and CN only)		✓
All other PE, RW and CN work orders	✓	
Fund transfer (no change to current authorization level)		
State force labor (Group Cat 04) on CN work orders	✓	
All other transfers		✓
Reduction		
PE, RW and CN work orders		✓

* The OSC Program Manager (or designee) must authorize these expenditures.
+ The Regional Administrator (or designee) can authorize these expenditures.

How to Check the Status

At times it may be necessary to check the status of a work order authorization. OSC Program Management uses a statewide database to record and track the status of all active work orders. Anyone can access this database to view the latest information about a work order.

The database runs in FileMaker Pro Version 4.0. It is located on the Stargate server in OSC and is accessed through the Hosts button in FileMaker Pro. The name of the database is WOA CENTRAL DB. Contact the Construction Program Authorization Engineer in OSC Program Management for assistance with accessing this database.

Managing Work Order Expenditures

The work order is the basic tool used to manage the funding appropriations made by the Washington State Legislature. Appropriations are broken down to program allocations, and these are then broken down to subprogram allocations for each Region. Specific work within each subprogram allocation is identified by a unique Program Item (PI). The work to be accomplished by each Program Item is defined by one or more Work Items (WI), each of which will have a preliminary engineering, right of way, and/or construction phase. A separate work order is tied to each Work Item phase. There is always one and only one work order for each Work Item phase. However, funding for a given Work Item phase can come from more than one subprogram allocations. The work order, then, is a valuable tool to monitor and manage costs associated with projects in the highway construction program and to track expenditures for a given subprogram allocation.

Work Order Groups

Work Order groups and group categories are established to provide a further breakdown of work order expenditures. The group category segregates expenditures by type of work, such as state force work, work done by others under a payable agreement, or work done by a contractor. Multiple groups may be set up in each group category. Regions have authorization to move funds between group categories as long as the net transfer is zero and other criteria is met. Increases in the state force category on the CN phase require OSC approval. Group categories may not be reduced below actual expenditures to date. The regional authorization should be used to eliminate unnecessary processing of work orders by OSC Program Management and OSC Accounting Services.

On active work orders, expenditures should be controlled in the Region. If a project is not going to have any direct charges made to it for awhile or if the project needs to be closed, then the Region or OSC can close the groups on any particular type of funding. Closing the groups can limit or totally restrict the use of the work order funds.

Responsibilities of the Project Manager

The assigned Project Manager in the Region is the person with primary responsibility for monitoring the specific activities of a work order and for making sure it stays within authorized funding. The Project Manager should establish a work plan that includes an expenditure plan. The expenditure plan should clearly show how much has been spent each month and how much is planned to be spent. A clear understanding of the expenditure plan for a project is critical. If additional funds are needed, they should be requested before expenditures overrun.

The Region Program Manager monitors the subprogram allocations and expenditures. A general review of work orders in the highway construction

program is performed, but it is the Project Manager who has primary responsibility for monitoring and managing the project expenditures.

Reporting on Work Order Expenditures

Work order authorization and expenditures are tracked using a variety of printed reports and database reviews. Work orders are generally reviewed on a monthly basis but may be tracked more frequently if the situation warrants. Reports are available from TRAINS, CPMS, and FIRS to use for tracking expenditures. In addition, some mainframe data can be downloaded to a personal computer for use in producing customized reports, charts, and graphs.

Establishing Federal Aid Agreements

A federal aid agreement, initiated by completing FHWA Form 120, defines the scope and cost of a project which will utilize federal funding. When approved by FHWA, the form establishes an agreement by FHWA to participate in the project cost. While this form is prepared and submitted by OSC, Region Program Management staff need to understand the requirements for receiving federal aid funding on projects.

Approval of a federal aid agreement is required prior to starting any project phase where the Department plans to use federal funds. Any expenditures that are incurred prior to FHWA approval are not eligible for reimbursement. An additional authorization may be required if there is a change in project scope or new work is added to the project. This is particularly important during construction when new work may be added to the project by a change order.

How the Approval Process Works

FHWA Form 120 is prepared by OSC Program Management using information provided by the completed Work Order Authorization form. It is reviewed and approved in OSC, then submitted to FHWA for review and approval. The FHWA review considers such questions as:

- Are the requested funds available?
- Is the project as described eligible for the type of funds requested?
- Has the state met FHWA requirements for developing the project?
- Is the project in the approved STIP?

Once the review is completed, FHWA returns the approved form to OSC Program Management. At this point, a work order authorization can be approved and forwarded to OSC Project Support Services and set up in TRAINS. Copies of the approved form are distributed to the Regions for informational purposes. Figure 3.6 shows the steps involved in federal aid approval.

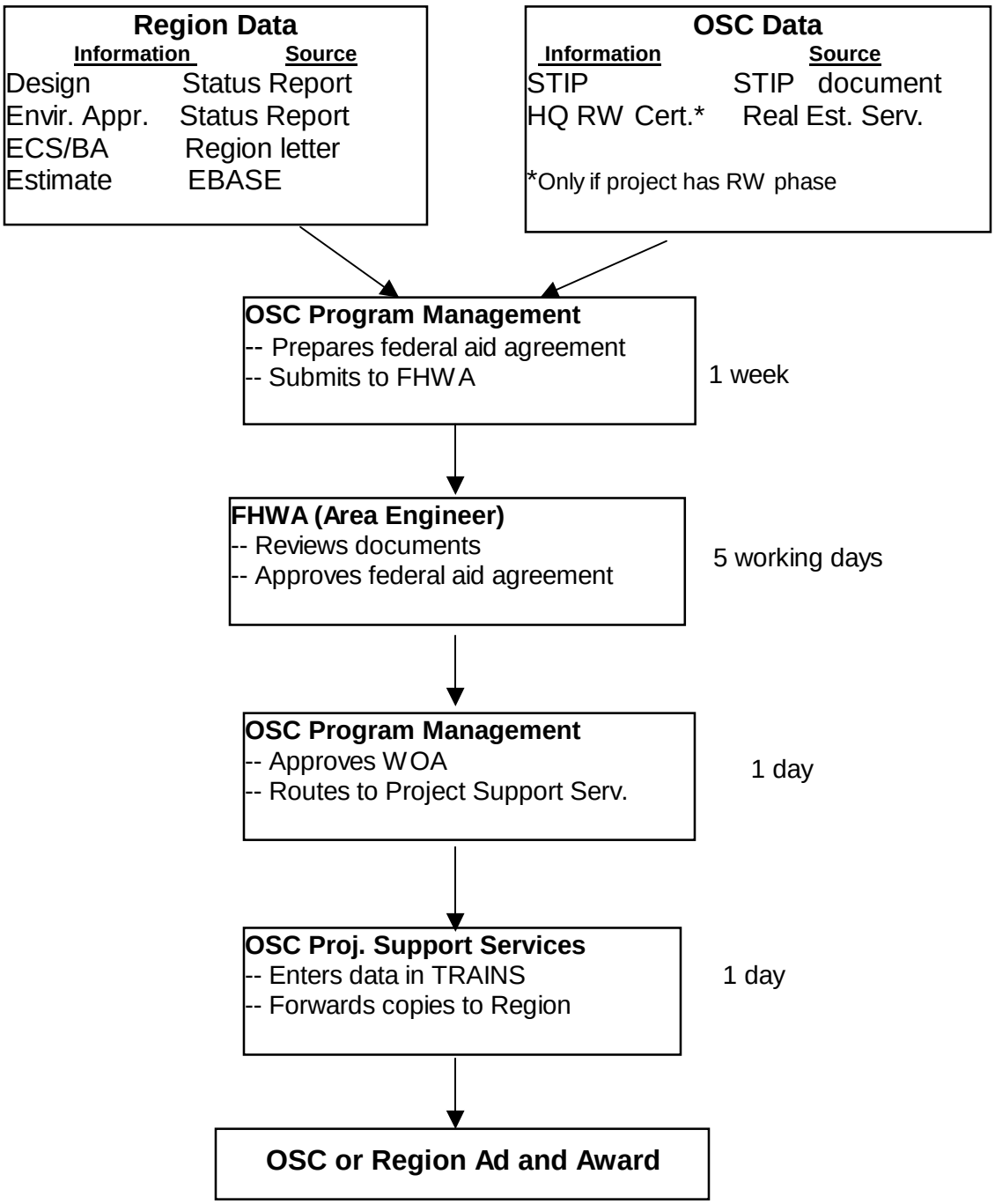


Figure 3.6 - Federal Aid Approval Process

What is Checked on Federal Aid Agreements

A number of items need to be considered when setting up a federal aid agreement. The following are some of the questions that need to be answered.

- **Is the project in the approved STIP?**
  If the project is not included in the current STIP, FHWA will not approve the project authorization. OSC and the Region will need to work together and agree on how to proceed with the project until the STIP issues are resolved.

- **Is the project already obligated using SPES or STP Agreements?**
  Some projects are authorized as bucket projects with FHWA by using SPES or STP agreements. Review the list of projects obligated on these agreements to see if the project will use these fund agreements.

- **Are all the required supporting documents available?**
  Prior to the right of way or construction phases being submitted to FHWA, the design and environmental requirements for the project must be approved. This includes approved RW plans, a Relocation Assurance Letter (if applicable), and an Estimate Form for RW Authorization. The RW Certification Letter is also usually submitted with the form for construction projects. (An exception is railroad crossing construction performed by the railroad within the railroad right of way. If this same work is performed by the state or a contractor, a Right of Way Certification Letter is required.) Submitting Form 120 to FHWA with items missing only increases the review time and causes FHWA staff to withhold approval until all the required information has been received.

How to Modify a Federal Aid Agreement

The federal aid agreement must be modified to increase or decrease the amount under agreement for each phase. This should be done as soon as it is known that the planned project costs differ from the current project agreement. OSC Program Management cannot process a modification for an increase or decrease in cost if it is projected that the project will not exceed the current agreement before additional funds are available.

To determine if a modification is required, compare the current plan for the project to the amount shown in the federal aid agreement. Reports from TRAINS and CPMS are available to assist in this process. However, it may also be necessary to review project data if errors exist in CPMS and TRAINS. If the amount of difference is relatively small, it may be best to wait until the project is nearly completed to process a modification or to allow the final voucher process to satisfy the modification requirements.

Understanding Federal Aid Project Numbers

Each project phase (and some third party agreements which are considered reimbursable) is identified by a Federal Aid Project Number. The type of project

funding and appropriation must be determined before this number can be assigned.

OSC Program Management assigns the Federal Aid Project Number (except on emergency relief and some demonstration projects) when the project phase is submitted to FHWA for approval and authorization. This number usually remains the same for all phases. Occasionally PE is programmed under one Federal Aid Project Number and construction is programmed under another.

The Federal Aid Project Number is a series of alpha and numeric characters followed by a number enclosed in parentheses. The State Route is usually identified in the number. Exceptions occur for projects on emergency relief, for statewide projects, and for projects on multiple state routes. The project location provides the information necessary to select the next sequential number shown in parentheses. The following are examples of Federal Aid Project Numbers.

Interstate: IM-090-1 (302)

IM ⇒ Funding Type (Interstate Maintenance)
090 ⇒ State Route
1 ⇒ State Route Section (per "Status of Development of the National System of Interstate and Defense Highways")
(302) ⇒ Sequential Number within State Route Section

National Highway System: NH-0012 (040)

NH ⇒ Funding Type (National Highway System)
0012 ⇒ State Route
(040) ⇒ Sequential Number within State Route Section

Emergency Relief: ER-90-02 (038)

ER ⇒ Funding Type (Emergency Relief)
90 ⇒ Year of Disaster (i.e., 1990)
02 ⇒ Number of Disaster within FFY (i.e., second disaster)
(038) ⇒ Sequential Number of Disaster

Note: The prefix "AC" is added to the funding type when the federal aid project is selected for Advanced Construction (for example, the project number would start ACIM for Interstate Maintenance funding or ACNH for National Highway System funding).

SPES and STP Agreements

Each year, WSDOT submits a Statewide Preliminary Engineering System (SPES) agreement to FHWA to request project approval on a list of PE projects for that calendar year. The agreements are set up based on the type of appropriation (i.e., Interstate Maintenance, National Highway System, etc.). Similarly, each year

WSDOT submits a Surface Transportation Program (STP) agreement to FHWA to request project approval on a list of projects for the calendar year. These agreements are set up by project phase.

The SPES and STP agreements list those projects with a start date in the calendar year and indicate the total dollars to be spent. OSC Program Management monitors each agreement to track the dollars spent and the new projects coming in. The agreements may need to be modified to add new projects or to adjust the total obligation. An agreement does not necessarily have to be modified if the dollars on an individual project change. However, if it appears the overall funds will overrun, then a project modification must be made. The agreement does have to be modified to account for the addition of new projects. Because information used in these agreement comes directly from CPMS, it is important to keep the project start dates and the dollar aging as accurate as possible in that system.

Advanced Construction

Advanced Construction (AC) allows work to be performed on approved federal aid projects without having to obligate federal funds apportioned or allocated to the state. AC allows a state to proceed with highway construction, metropolitan planning, rail-highway crossings, bridge replacement/rehabilitation, hazard elimination, or planning and research projects provided the state:

- has obligated all funds apportioned/allocated to it for the proposed project,
- has used all obligation authority distributed to it, or
- has demonstrated that it will use all obligation authority distributed to it.

The state may proceed with an Interstate Maintenance project without regard to apportionment or obligation authority balances. However, the total AC authorization within a funding category cannot exceed the funding limitation established.

The Advanced Construction project must meet the same requirements and be processed in the same manner as a regular federal aid project. Authorization by FHWA does not constitute a commitment of federal funds. The state can take steps to qualify a project for federal participation, and then convert the project to AC at a later date. FHWA cannot reimburse the state until the project has been converted. As a result, the state must submit a final voucher to FHWA upon completion of the project even though the project has not been converted.

Soft Match Funds

Title 23, Section 120 (j) of the United States Code (USC) permits the states to use certain toll revenue expenditures as a line of credit towards the non-federal matching share of all programs authorized by Title 23, except Emergency Relief. This regulation is known as "soft match" and allows the federal share of a project

to be increased up to 100 percent. Soft match does not bring additional revenue into the state but simply allows the state to obligate its apportionment more rapidly and on fewer projects. Soft match is used as a money management tool and does not reduce or replace the state matching funds required on a project.

Soft match is calculated by comparing ferry system revenues to operating expenditures. When expenditures exceed revenues, a line of credit or toll credit occurs. Every time a project receives soft match funds, this credit balance is drawn down by the state match share. The line of credit is calculated annually and replenishes the line of credit account. The Finance and Administration Service Center tracks soft match expenditures and compares them to the line of credit to ensure that the account doesn't drop below the available credit limit.

If soft match funding will be used on a project, the Work Order Authorization form should clearly indicate this funding source and the federal pro-rata share that will be used. This information is needed so that OSC Project Support Services can properly code the work order for soft match.

Chapter 4: Managing Change

Overview

The Operating Book establishes a commitment to deliver the projects within the approved highway construction program. In order to deliver this program of projects, staff in the Region and Olympia Service Center (OSC) Program Management offices work together to manage change.

Change management begins primarily in the Region at the project level. Regions review project schedules, update project aging, and evaluate the need for project changes. While each Region may approach these activities in a slightly different way, the goal is the same: to evaluate the overall impact of individual project changes on the Region's ability to deliver the highway construction program. When a project level change is needed, data in CPMS must be updated and the change approved. The degree of the change (minor, moderate, significant, or major) determines what level of approval is required.

A report runs automatically from CPMS each night called the Nightly News which is used to monitor and track project level changes. Minor and moderate changes can be approved within OSC Program Management. Significant changes require approval by the Secretary of the Planning and Programming Service Center. Major changes must be approved by the Department Project Screening Board (DPSB). Defined procedures are in place for submitting change requests to the Screening Board and are described later in this chapter.

Change management also occurs in OSC at both the project and program level. Program managers track project changes through the Nightly News. They contact the Regions if clarification is needed about the reason for a change and work with the Regions when changes are submitted to the Screening Board. They also evaluate the impact of project level changes as they roll up to the subprogram and program level. At times, the impacts of individual project changes will balance each other out at the subprogram level. That is, one project may have more expenditures than planned while another project in the same subprogram may be delayed and have fewer expenditures. Thus, at the subprogram level, expenditures will stay in line. At other times, however, adjustments need to be made at the subprogram level to accommodate project level changes.

Another area managed by OSC is the impact of program level changes as they filter back down to the project level. A change in program funding may require projects to be delayed or funds to be moved. OSC Program Management maintains close communication with Regions and with other offices in the Department if these changes are required.

Maintaining Accurate Data

The Capital Program Management System (CPMS) is used for inputting and maintaining data about the projects in the highwayconstruction program. Program Management uses the data in the system to communicate current and proposed program accomplishments to others both within and outside the Department. The data is used at the phase, project, subprogram, region and statewide level and is accessed by many different users and different computer systems for a variety of purposes. Those responsible for inputting and maintaining this data need to make sureit is accurate in order to support decision making and the development and delivery of the highway construction program.

Program Management has various processes in place to keep the information in CPMS current. Since the data stored in CPMS comes from several other sources and is provided by many other offices, it is important to make sure others understand how the data is used and why it is important. Program Management needs to take time to work with staff in other offices such as Planning, Design, Construction, Maintenance, Environmental, and Real Estate Services to help ensure that information is provided in a timely manner and, more importantly, that it is reliable. The following pages describe some of the key data elements that must be maintained.

Phase Start Dates

The Department reports accomplishments and remaining plan starts using CPMS data. Maintaining this data is critical for ensuring credibility.This data is used by internal customers to manage work assignments. Construction staff need to know when projects will go to ad so that they can predict actual construction starts and manage staff to ensure that adequate resources are available to administer the contract. The data is also used to decide how many and what level of temporary employees may be required for the summer, whether additional staff will be needed or overtime anticipated, or whether staff can be moved from other offices to cover projected work loads. To be able to make these decisions wisely, accurate phase start and end dates must be available.

Start dates are used to plan each federal fiscal year's use of available obligation authority (OA). These dates are important to help decide if there is an adequate dollar volume of projects anticipated to start during the year, if the current plan exceeds the available OA, or if there is a need for Advanced Construction or other financing techniques to fund planned projects. Phase start and end dates are input in CPMS on the CS screen.

Planned Project Expenditures

Monthly aging of project expenditures is maintained in CPMS on the CD screen. The amount that is planned to be spent each month needs to be input on this screen. When loading the initial project expenditure plan in CPMS, it is important to allow adequate time for project start up on all phases. On the RW phase, the only work typically completed in the first several months is preparation of parcel appraisals. Expenditures for acquisition of property normally take several months to process so the expenditure plan should reflect when final payments are actually expected to be made.

On the construction phase, it is important to allow time for bids being advertised, contracts being awarded, contract work getting started, and payments being prepared, reviewed, and paid through CAPS before significant expenditures actually come into TRAINS. Depending on when the contract cutoff for payment is (the 5th or the 20th) and when work starts, the first few months of payments to the contractor can be very small. Typically contract work does not start until approximately eight weeks after a contract is advertised.

Another thing to consider on the construction phase is payments for materials on hand. In one month, it may be necessary to make a large payment to the contractor for materials on hand and the next month it might be necessary to incorporate these materials into the project. On some projects, these materials on hand payments can be extremely large particularly if there are bridge items on the contract such as structural steel. The project expenditure plans in CPMS need to accurately reflect these contract elements.

Planned Program Expenditures

The separate project expenditure plans in CPMS are rolled up to the subprogram level for the Department to use in developing an allotment plan. This allotment plan is compared to actual expenditures and used to measure program delivery. The monthly program expenditure plan is also used as an aid in financing the cash flow of obligated funds on federal aid projects and to determine when additional funds may need to be obligated.

Total project expenditures are used to determine biennial expenditures as well as to develop an obligation plan. If CPMS data is not maintained accurately, the program can be underspent by a substantial amount. Underspending the program is not necessarily a bad practice when it is the result of cost savings on projects. Underspending the program, however, can result in missing the opportunity to advertise an additional project or in not accelerating a project to address system plan needs.

CPMS expenditure plan data is also used to develop reappropriation figures that are used in budget development efforts. By reappropriating underrun expenditures, funds that would have been directed to new project starts can be directed instead to current projects whose schedules have been delayed.

O-lines

When expenditures on a finance code exceed the amount authorized for that finance code, an overrun exists and shows an O-line. O-lines display in CPMS on the HP, HR, and HC screens. If the total expenditures on a work order exceed the total amount authorized for that work order, then there will be an O-line on every finance code on the work order. This will cause problems at the program level as more funds will have been spent than were originally planned. If the program was already in balance, other work in the program may have to be deferred to accommodate these unplanned expenditures.

If only one or two finance codes on a work order are overrun and the work order total has not been exceeded, the remaining plan for the project will be overstated in CPMS. Several projects with this type of overstatement can cause the program to be overstated by a significant amount.

For information about understanding and resolving O-lines in CPMS, see:

- http://www.wsdot.wa.gov/ppsc/pgmmgt/cpms/working/working7.htm

Deficiencies

Each project in the highway construction program must be tied to a need identified in the Highway System Plan (HSP) in order to manage system plan priorities and measure program effectiveness. Accurate data must be maintained in CPMS to describe how each project addresses deficiencies identified in the HSP. Deficiency data may also be used to support a legal defense if a lawsuit is brought against the Department.

Data on project deficiencies is maintained in CPMS on the DS screen and in the Priority Array Tracking System (PATS). Project beginning and ending mileposts are used to communicate the limits of each project, to align the project to system plan needs, and to provide supporting data for generating geographic maps or displays for the Commission or Legislative Transportation Committee.

Managing Project Level Changes

Regions are responsible for managing changes that occur at the project level within their region, with OSC providing assistance and guidance. The following chart shows which types of change are monitored at the project level and which of these can have an impact at the subprogram level.

Type of Change	Monitored at Project Level?	Impact at Subpgm Level?
Scope	✓	
Cost	✓	✓
Workforce	✓	✓
Schedule	✓	✓
STIP	✓	
Expenditure Plan	✓	✓
Fund Source	✓	✓

Scope Changes

Before a project is selected for inclusion in the highway construction program, an initial project is developed as accurately as possible. However, due to constraints on time and resources, this initial estimate may lack some information. Once a project is selected for the highway construction program (HCP) and approved by the Legislature, the remainder of the design process will proceed. The design process will use the initial project scope and builds upon it until a final set of plans is ready to advertise for bids. This process can take a month or can extend many years depending on the type and complexity of the project.

During this process, changes in conditions or needs may occur. Adding or deleting Work Items will change the scope of a project. Once these changes are documented, the design may proceed with a different or revised scope. To revise the project scope, the Region can:

- Submit a scope revision memorandum to OSC for approval (as explained in the following section),
- Document the scope change in the Design File, or
- Rewrite and submit a new Project Summary (if the project scope is substantially changed).

Often, a change in scope will result in a corresponding change in costs. Similarly, a change in costs can result in a change in scope. To stay within project or program budgets, project work may need to be deleted or deferred. One option is to "stage" a project, breaking a job into logical subdivisions that can be contracted separately. If it is

found that the scope change results in a major revision to the project, Screening Board approval can be requested, even if the change does not break a major level threshold. All scope revisions should be discussed with OSC Program Management in order to determine the acceptable course of action for the particular project. There are well established procedures and documentation within each Region which will also provide further assistance.

Revising the Project Summary

One of the first steps in project development is preparation of the Project Summary. This document includes a definition of the project scope and cost and establishes a contract between the signatories: the Regional Administrator (or his designee) and the OSC Program Management Engineer. Subsequent scope changes may require modification of the agreement. The Project Summary should be revised to document changes that occur prior to final design approval. These changes may include: increasing or decreasing paving length, tying multiple projects together, and deleting, adding or substituting Work Items.

The mechanism for modifying the Project Summary agreement is typically the project summary revision memorandum. Only on the rarest occasions will a project summary need to be totally rewritten to replace the original. Usually a revision memo, submitted by the Region, provides a brief description of the original approved scope of the project, the reason change is required or recommended, and the details of the change.

The Priority Development Engineer oversees the OSC review of the requested change. Offices with pertinent expertise such as Design, Traffic, or the Materials Lab may be asked to review and concur in the revision. After the review, the OSC Program Management Engineer will recommend approval, conditional approval, or disapproval of the revision request. The decision may be documented through a formal memo back to the Region, or less formally via a signed approval stamp on the original request, one copy of which is returned to the Region and another copy filed with the Project Summary in OSC. Some scope changes will require approval at a level higher than the OSC Program Management Engineer.

Cost Changes

Project costs may increase or decrease during preliminary engineering, right of way acquisition or construction due to a number of factors. Most of these factors will be discovered during the design of a project, such as:

- Changes in environmental regulations
- Changes in project scope
- Changes in contract bid item prices
- Changes in needs or the way they are addressed

- Dollar inflation
- Plan or design changes during construction

All project cost changes should be thoroughly reviewed in the Region Program Management office before they are pursued. If a cost change is necessary in order to complete the project as scoped, the impacts to the associated subprogram should be analyzed. OSC and the Regions must determine how to accommodate the change within available biennial funding limits. Every project cost increase must be offset by expenditure plan decreases in other projects by shifting allocations from other subprograms or by finding new funding sources. Some cost increases may be accommodated early in the biennium by overprogramming. That is, Regions may adjust their planned expenditures in CPMS a certain amount over their biennial allocation, knowing there will be unanticipated project cost changes or project delays. OSC determines how much overprogramming is tolerable at each point in the biennium.

On-going communication needs to be maintained between Region and OSC Program Management. All cost changes must be clearly documented in CPMS and in project files in a timely manner. The level of the cost change will determine the required approval level. See Appendix H for a chart showing the change thresholds for costs.

Workforce Changes

Workforce monitoring is an important factor in program delivery. Because each Region has a unique construction program and organizational structure, the way workforce is analyzed and used will vary. Each Region is given workforce allocations for the biennium measured in Full Time Equivalents (FTEs). The Region allocation is based on a dollar expenditure model for the biennium. One FTE is not necessarily the same as one person. One monthly FTE is equal to 150 monthly hours of labor for estimating workforce needs. This figure takes into account a normal 40 hour work, but excludes time for vacations, holidays, sick leave and training. The 150 hour per month average is used for planning only and does not reflect actual workforce use.

Regions analyze allocated FTEs against the number of actual employees and make personnel adjustments accordingly. The most important part of workforce monitoring is to forecast increases or decreases in the workforce. Decisions are based on this analysis for salaries, consultant usage and staffing levels.

For more information on workforce management and monitoring, see:

- http://www.wsdot.wa.gov/fasc/workforce/

Schedule Changes

The project schedule can be very dynamic. The most important date to meet is the construction start (ad date), but it is very important to remember that the start dates for the design and right of way phases have direct influence on the ad date. The ad date is the only date that is reported to the Legislature at the beginning of every biennium. The Legislature reviews these commitments every three months.

Sometimes it is necessary to change the ad date because of other factors. The schedule may need to change as a result of inadequate planning, a lack of resources, inclement weather, unanticipated funding opportunities, or faster than anticipated work on the part of the contractor. At other times, projects may need to be accelerated or deferred. One mechanism used to account for unplanned project delays is called Advanced Engineering (AE). A project can be designated as an AE project in any subprogram in order to have the project ready for construction in case another project is delayed. There is no limit to the number of AE projects. However, having too many projects ready for AE may not be efficient since some projects can't sit in anticipation for construction due to the nature of the project. In other words, they don't have a long "shelf life."

Each Region will use different tools for monitoring project schedules but all changes should be thoroughly documented and discussed with OSC Program Management. Regions should seek to evaluate the impacts to the regional highway construction program and develop possible solutions before opening discussions with OSC. The Service Center will be able to help evaluate possible impacts on the overall statewide program.

STIP Changes

The Statewide Transportation Improvement Program (STIP) is a document which combines all the various Transportation Improvement Programs (TIPs) from all of the Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Organizations (RTPOs) around the State. This document includes all transportation projects from every public agency in the state that plan to use federal funds or are regionally significant. The STIP is a planning document used for financial feasibility of the use of federal funds. The TIPs, on the other hand, are used for public information relating to transportation improvements and air quality conformity in the various regional planning areas.

In all cases, it is important to keep these documents as current as possible. Amending the STIP is contingent upon updating or amending the various TIPs. In other words, the RTPOs and MPOs are responsible for amending the STIP through updates or amendments to the TIPs. The TIPs are modified with WSDOT projects on a regular

basis. Each RTPO and MPO has a different procedure to amend or update the TIP and each Region may assign this responsibility to an office other than Program Management. No matter which office performs this task, it is important to closely coordinate with the various RTPOs or MPOs.

Due to the time requirements built into the amendment process, such as MPO schedules and prescribed periods for public involvement, it is critical to submit amendments early enough to avoid delaying the proposed project.

The Highways and Local Programs Service Center is responsible for maintaining the STIP. However, the Regions must ensure this happens via the TIP amendment process or projects may not be eligible for federal funding and program delivery may be affected. For a copy of the current STIP, see:

- http://www.wsdot.wa.gov/TA/STIP/STIPHP.htm

Expenditure Plan Changes

Each project phase has an expenditure plan based on the project schedule and available resources. The initial biennial plan is based on regional subprogram targets, priorities and specific project details. Once a project is underway, expenditure plans are obtained from the Design, Real Estate Services, and Construction offices. Expenditure plans are usually updated every month, but each Region has the flexibility to manage this process as necessary. This information is normally obtained directly from the Region project office assigned to the particular project. The information is entered in CPMS and tracked on various reports.

Keeping track of expenditure plans starts at the project level and is monitored at the subprogram level. The sum of all of the changes at the project level affect the total subprogram. Each month, the current plan is compared to the original plan. This monthly status check provides important information for policy or plan management decisions.

Fund Source Changes

When building the highway construction program, certain funding assumptions are made based on the most current revenue projections for state and federal funds. Using these projections, OSC Program Management provides each Region with targets for federal, state and local funds. Inevitably, these projections are adjusted which may require changes at the project level.

Some changes result from actions by the United States Congress or actions by the Washington State Legislature. Other changes result from internal decisions intended to maximize the use of a particular fund source. The basic philosophy for selecting the proper fund source is discussed in Chapter 2. At any time during the biennium, a

decision may be made to switch a project phase from one source to another to better comply with the intent of the funding. Therefore, Regions should prepare for federal fund eligibility on all projects whether federal funds are used or not. This allows greater flexibility in fund source management and permits the state to maximize the use of all types of funds.

The OSC Funds Management Engineer is responsible for tracking apportionment balances and available Obligation Authority (OA). Regular OA meetings in the Olympia Service Center are held to review the Department's plan to obligate federal funds. These meeting focus on the obligation balance, apportionment balances, changes in the plan from the previous month and the actions needed to rebalance the plan. In order to be eligible to receive redistributed or reapportioned OA, the Funds Management Engineer may decide that Regions should convert fund sources to meet a new target.

The Region and OSC Program Management offices need to thoroughly discuss possible changes to fund sources and agree on specific project changes. The impact of a change needs to be fully evaluated before a final decision is made. It can take several months to reach a decision and complete all the changes required in the STIP, the design documents, or the CPMS file. The Regions then have the responsibility for ensuring that all necessary coordination is completed in order to make the changes. This coordination involves:

- Ensuring all changes concur with NEPA and other environmental regulations
- Amending or correcting the TIP as necessary (which amends the STIP)
- Working with project offices to make necessary changes to the design documents and contract specifications
- Revising the CPMS file

Tracking and Approving Project Changes

The highway construction program is dynamic and ever-changing. Because of this, Region and OSC Program Management offices need to take steps to ensure that project changes are monitored, reviewed, and approved. The two primary tools used in this process are the Nightly News report and the Department Project Screening Board.

The Nightly News

As Regions modify project data stored in CPMS the system creates a record of the changes. It also evaluates the type and magnitude of a change. Changes to cost, scope, and schedule are compared against a set of criteria which define certain thresholds. Users making changes that exceed a defined threshold are said to have broken that threshold. When the threshold is broken, CPMS produces a record of the change.

An overnight process in CPMS prints a report which shows all project changes made the previous day. This report is called the Nightly News. Copies of the report are provided to Region program managers for their information and review and to OSC program managers for review and approval. Nightly News changes are categorized as to magnitude or importance. These categories range from "informational" for which no OSC approval is required, to "major" which requires Screening Board approval. For a sample of the Nightly News report, see:

- http://wwwi/wsdot.wa.gov/ppsc/pgmmgt/cpms/reports/HSrpt.htm

When a threshold is broken in CPMS, the user must enter an explanation of the reason for the change. This explanation is critical. A clear and concise explanation helps the approving authority understand the need for the change. Unclear or overly brief explanations on the Nightly News are of little use in obtaining approval signatures. Additional online documentation may be created in CPMS on the WX screen to expand on pertinent change information.

The Nightly News report records the time and date of the change, the reason for the change, and the user ID of the individual who made the change. It also provides a before and after snapshot of the CPMS data. Every change is also assigned a Change ID Number. Threshold breaks reported on the Nightly News are classified as: informational, minor, moderate, significant, and major. Each threshold level requires approval at a different level of authority. Minor threshold breaks require approval by the appropriate program manager in OSC. Moderate breaks are approved by the OSC Program Management Engineer. Significant changes are approved by the Assistant Secretary of the Planning and Programming Service Center. Major changes must be approved by the Department Project Screening Board (DPSB). Once a change has been approved or denied, the result is documented in CPMS and TEIS also maintains a record of the outcome.

The types of change that can break thresholds include changes in project cost, scope, improvement type, subprogram, project length, or construction season. Adding a project to the current program (an unprogrammed project) or deleting or deferring a project from the program will also break a threshold and require approval. The procedures for approving project changes have been agreed to by the Legislative Transportation Committee. These procedures are discussed in more detail on the following pages. For details about how cost, schedule, and scope changes are evaluated against threshold levels, see:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/cpms/working/working6.htm

Deleted and Deferred Projects

Occasionally a programmed project may need to be deleted from the highway construction program. This may occur when the work is accomplished by other means, or when errors occur in the original needs survey or inventory. A deferred project is one that has been delayed until the next quarter, the next construction season, or the next biennium. A project may be deferred for reasons discussed previously. Because of the Department's commitment to deliver projects on time, deferrals should be avoided whenever possible.

Deferring a project to a later construction season or biennium or deleting a project altogether (removing project approval codes and dollars) will result in a threshold break that triggers a Nightly News report and requires concurrence by OSC Program Management. After the change has been approved by the OSC Program Management Engineer, the deferral or deletion is reported as an informational item to the Screening Board.

Unprogrammed Projects

Occasionally it is also necessary to add projects to the program that were not included in the Legislative or Operating Books. The procedure for programming these projects often depends on timing, size, type, and relationship to other work. As soon as the need for an unprogrammed project is identified, the Region and OSC Program Management offices should establish a dialog on programming and funding issues.

Emergent needs are those not identified during program building. Some programs are more susceptible to this problem. Scour projects in the P2 program and unstable slope projects in the P3 program, for example, typically suffer from unexpected problems. Abnormal freeze-thaw cycles may accelerate pavement deterioration and cause a P1 project to be advanced. Emergencies such as landslides, washouts, and erosion caused by natural disasters may also require unprogrammed projects.

Some minor unprogrammed work is anticipated. Minor Capital reserves exist in some programs. These provide Regions with discretionary funding to handle some unplanned work in particular categories. For example, there are minor capital reserves in the Rest Area, Unstable Slopes, and Weigh Station categories. Each Regional Administrator also has the discretion to use larger Emergent Needs reserves for unplanned projects within the highway construction program. Work orders established for these projects do not require individual programming action.

A few unanticipated needs may be approved administratively. These are typically for small projects. Most unprogrammed projects require Screening Board approval which is followed by Secretary or Commission approval. Commission Resolution No. 518

has established that unprogrammed projects with an estimated value equal to or less than $750,000 in the P1, P2, P3, I2, and I4 subprograms can be approved and executed by the Secretary of Transportation. Approval of unprogrammed projects greater than $750,000 in these subprograms and all unprogrammed projects in the I1 and I3 subprograms remains with the Transportation Commission. Resolution 518 does not address the newest subprograms, I6 and I7.

Unprogrammed projects using federal funds must also be included in an approved STIP before the construction phase can be authorized. (See the preceding section called STIP Changes.)

Department Project Screening Board

The Department Project Screening Board (DPSB or simply the Screening Board) is the designated body for approving major project changes. The board is made up of the Deputy Secretary for Operations and the Assistant Secretaries for the Field Operations, Environmental and Engineering, Finance and Administration, and Planning and Programming Service Centers.

Screening Board approval is required for all major changes to project costs and scope and for all Region requests to program new (unprogrammed) projects. Project deletions, deferrals, and season changes are reported to the Screening Board as informational items. Other items such as discussions of complex or controversial projects may also be presented for the Board's information or input.

Projects are normally submitted to the Screening Board by the Regions. However, OSC or the Washington State Ferries may also submit items for consideration. Agenda items for each meeting are submitted through the Program Management Engineerand reviewed by OSC in a pre-screening board meeting. The review of an unprogrammed project will focus on such items as whether the project is an appropriate candidate for the construction program, which subprogram the project belongs in, how the project ranks in priority as compared to other programmed work, the impact to other projects in the program, and adjustments required to the program to accommodate the change.

The Region or Service Center sponsoring the change provides a representative to present the item to the Board for approval. (Items classified as "consent agenda" at the pre-meeting do not require sponsor representation.) Following the presentation by the Region and a recommendation to approve or disapprove by the Program Management Engineer, a vote is called for by the Chairperson. Approval by the Board is final in the case of scope changes. Unprogrammed projects are referred to the Secretary for programming action. In some cases Commission approval is required. For additional information about the Screening Board, see:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/dpsb/default.htm

Managing Program Level Changes

From the time the Legislative Book is approved by the Commission, changes occur that require action on the part of Program Management. External factors may result in schedule changes. Design or permit issues may delay a planned construction start. Favorable bids may come in that are significantly below the Department's estimates. Good weather or bad weather may result in project delays or accelerations. Federal funding opportunities may cause a shift in strategy to maximize available resources. Expenditure plans can be impacted by all of these changes and many others as well.

Despite these changing conditions, the Department has a commitment to its customers, including the Legislature, to deliver the approved highway construction program. This commitment exists at the project level and at the program level. It means delivering individual projects as well as delivering the strategic objectives of the program as a whole.

Achieving the service objectives as stated in the Highway System Plan (HSP) for each subprogram is an important consideration for the OSC program managers. At the program level, OSC program managers apply HSP action strategies to cost effectively manage public resources. Their statewide perspective aids in optimizing the use of funds appropriated to the highway construction program.

The need for program level modifications may be created by the cumulative effect of changes at the project level. Other modifications may be required due to Legislative actions that change the Department's appropriations, changes in or new opportunities for federal funding, policy changes by the Commission, or programs initiated by the Governor or Office of Financial Management that impact the Department such as reductions in workforce.

Program level modification may be required when:

- Expenditure plans exceed the allocation (are overprogrammed)
- Expenditure plans fall below the allocation (are underprogrammed)
- Expenditure plans use less than 100% of the federal allocation
- Workforce plans are out of balance with allocations
- Fund source plans are unbalanced
- Fund source appropriations are exceeded
- PE or RW phase actual expenditures are below planned expenditures
- Actual expenditure rates compare unfavorably with historical rates
- Actual projects to ad do not match planned ads for the quarter

All program level modifications need to be implemented at the project level. Adjustments can be accomplished by modifying project cost, scope, schedule, or

workforce as described under Project Level Changes. It is important to select the right projects to modify. This decision will depend on a project' s size, location, priority, schedule, funding source, relationship to other projects, and impact on the public. Collaborative decisions by OSC and Region Program Management staff will yield the best plans for modifying the program.

Tools for Program Level Management

Managing change at the program level is accomplished by using the monitoring tools and reports discussed in Chapter 5. Reports are generated monthly for review by OSC program managers. Most of these reports are designed to compare the plan for delivering the HCP with actual monthly progress.

Review meetings are held regularly to analyze these reports and discuss actions to accommodate observed changes. A monthly Allocation Summary meeting is the primary forum for reviewing actual and planned expenditures against allocation totals. This meeting is conducted by the OSC Program Management Engineer. Feedback is provided to Region executives and program managers immediately through phone calls or e-mails and also in a monthly teleconference. A monthly Obligation Authority (OA) meeting is conducted by the Federal Funds Management Engineer to review the federal obligation plan. The OA meetings evaluate federal funding changes, recommend strategies for accommodating them, and help locate program level problems that may need to be resolved.

OSC Managed Subprograms

Due to the nature of some subprograms, it can be difficult for a Region to accommodate a program level modification at the project level. For example, the Region may have a small overall allocation, the Region may have no other projects in the same category, or a change may be needed in a category that has a small allocation.

For this reason, some subprograms have been designated as statewide managed programs and are managed by the Olympia Service Center. The P2 subprogram (Structures Preservation) is an example of a subprogram managed at OSC. Structure replacement and rehabilitation projects are relatively high in cost compared to total program size. Regional funding targets for the P2 subprogram vary considerably from biennium to biennium based on needs. For this reason OSC Program Management sets regional funding targets for the P2 subprogram and makes program level change decisions. This improves flexibility statewide and facilitates efficient use of program appropriations.

Items Reviewed at the Program Level

The following table provides some examples of the different items that are reviewed at the program level and shows the types of comparisons that are made.

Review By	Bien Total	Bien to Date	Current Month/Qtr
• Program (I or P)	plan vs. appropriation		
• Region	plan vs. allocation	plan vs. actual; plan % vs. historical %	plan vs. actual; actual % of plan; change from prior plan
• Subprogram	plan vs. allocation	plan vs. actual; plan % vs. historical %	plan vs. actual; actual % of plan; change from prior plan
• Category	plan vs. allocation		change from prior plan
• Improvement Type	plan vs. target	plan vs. actual	plan vs. actual
• Fund Source	plan vs. allocation	plan vs. actual	change from prior plan
• CN Start Date	plan vs. actual	plan vs. actual	plan vs. actual
• PE/RW Start Date		plan vs. actual	plan vs. actual
• Project		final vs. original cost	
• Org Code	plan FTEs	actual FTEs	actual FTEs; monthly gains/losses; plan vs. actual

Chapter 5: Measuring and Reporting on the Program

Overview

Each project within the highway construction program represents a commitment to solve a need identified in the Highway System Plan. Throughout the biennium, Program Management regularly measures the delivery of the highway construction program and reports the results to others both within and outside the Department. Those who receive this information include the Legislature, the public, WSDOT executive staff, and the Transportation Commission.

The purpose of all this measuring and reporting is to evaluate how well the Department is meeting its commitments in each subprogram and how well it is supporting its overall mission to provide a safe and effective transportation system. In addition, this measuring and reporting helps Program Management determine if adjustments or changes are needed. In general, the Region Program Management offices are responsible for monitoring and reporting on the individual projects which make upthat portion of the highway construction program within their regional borders. OSC Program Management is responsible for monitoring and reporting on the overall statewide program and for coordinating with the Regions when adjustments or modifications are needed.

Measuring the Program

Program Management uses a number of tools to measure delivery of the highway construction program. The chart below shows these tools, the frequency at which the measurements are taken, and the primary audience for the information. Contact OSC Program Management for additional details about a given item.

Type of Measurement	Frequency	Audience
Performance Measures	Quarterly by State FY	Commission, Legislature
Allocation Summary	Monthly	Program Managers
Obligation Authority	Monthly	Program Managers
Quarterly Program Delivery	Quarterly by State FY	Commission, Executives, Legislature
Biennial Program Delivery	Biennially	Commission, Executives, Legislature
Paths & Trails	Annually	Legislature
Workforce Measures	Monthly	Program Managers, Executives, Commission

Performance Measures

The Legislature has established performance measures as a tool to evaluate how well the Department is meeting its commitment to deliver the highway construction program. RCW 44.28 describes the intent of the Legislature as follows: "Performance measures are . . a means of evaluating policies and programs by measuring results against agreed upon program goals or standards."

The Legislature has emphasized the importance of performance measures by strengthening RCW 43.88.090 to require transportation agencies to establish measurable goals, program objectives, and procedures for continuous self-assessment of each program and to begin to transition toward performance-based budgeting. The budget proposals sent to the Governor and the Legislature must include integration of performance measures. Performance-based budgeting will be piloted in the 99-01 biennium in selected agencies and fully implemented by all agencies by the 01-03 biennium.

Performance measures seek to answer questions such as:

- How many problems were solved?
- How much work was accomplished?
- Did the work get done when planned?

The Department reports these performance measures by workload, outcome, and efficiency to the Legislature through the Transportation Executive Information System (TEIS). Program Management plays a role in establishing meaningful performance measures for the highway construction program. Unique performance measures have been developed for each highway system plan action strategy. See Appendix G for a complete list of the performance measures for each subprogram.

In the last few years, the Department has also begun to look at ways to evaluate how effectively it is delivering the highway construction program. This evaluation is occurring because the Legislature has begun to ask questions such as:

- Has WSDOT accomplished its defined service objectives and action strategies with the funds given to it?
- Are highway system improvements being made for the costs expected?
- Have these improvements yielded the benefits expected?

This evaluation of the effectiveness of program delivery differs from performance measurements by seeking to determine whether the expected benefits to the highway user have been realized.

Currently, the pavement portion of the highway preservation program is the only program which is routinely evaluated for effectiveness. The Materials Laboratory Pavements section measures the improvement of pavement condition over several years of programming based on lowest life cycle cost.

Allocation Summary

Allocation Summary refers to a monthly measuring process performed by OSC and Region program managers. At the end of each month, after CPMS is updated with actual expenditures for that month, reports are run which compare actual expenditures for the month and the biennium to date with the allocation plan and the current CPMS plan. The purpose of this analysis is to determine if any part of the program delivery process needs to be adjusted to ensure commitments are met.

The Allocation Summary consists of a group of spreadsheets which are prepared and circulated monthly by the Operations Branch of the OSC Program Management Office. These spreadsheets include tabulations showing the official allocation for each Region and each subprogram. They show the total biennial plan, changes made since the previous month, actual expenditures for the month, actual expenditures accumulated during the biennium, and differences between the plan and allocation. They also show the allocation versus plan balance by fund source (i.e., federal, state, local).

The plan versus actual comparisons may be analyzed from a regional or subprogram perspective. Data may be summarized at the program or subprogram level or further broken down to provide review at the category level.

To determine the reason that actual expenditures fail to meet planned allocations for a given month, ad hoc reports that show project level details are reviewed. Some of these reports are prepared monthly from CPMS and sent routinely to Region and OSC staff. These reports identify which projects went up or down in cost or had their schedules slip or accelerate. Information about a project level change can help explain or verify cumulative deviations in the Region or subprogram biennial plan.

The following are examples of project-level reports which can be used for allocation summary:

- Month-End Cutoff Report – compares current month to previous month for this and next biennium
- Fund Source Expenditure Report – compares current month to previous month
- Fund Source Expenditure Comparison Report – compares current month to Book data
- Bow-Wave Report – compares plan to actual expenditures for the current month and year-to-date

The Allocation Summary process helps address such questions as: how do expenditures for the month compare to normal expenditures given the size of the program and historical spending rate, does the current spending rate need to be adjusted in order to meet the biennial plan, do adjustments need to be made to the allocation plan, is a request for unanticipated receipts needed, or should surplus funds be unallotted?

Obligation Authority

The Obligation Authority (OA) plan is used by OSC Program Management to manage the amount of federal funds that can be authorized in each federal fiscal year. The OA plan shows obligations by month, project, subprogram, and federal fund source (IM, BR, NHS, STP, etc.). Management of obligation authority ensures that federal funds are available for projects and programs, as planned, and that sufficient qualified projects are prepared and ready to utilize all federal funds available to the state.

Quarterly Program Delivery

In addition to the quarterly report on program delivery, a biennial report is also made from TEIS to the Transportation Commission and the Legislative Transportation Committee (LTC). This report compares a list of projects actually advertised for bid during the quarter to a list of projects planned to be advertised for bid as shown in the Operating Book.

OSC Program Management gathers data from CPMS each quarter for the report. Each program manager reviews the list of projects actually advertised during the quarter and checks to make sure that each project is counted only once. The regions then review the list and make any changes necessary, such as correcting typographic errors or noting delayed projects. A reason must be recorded for each variation from the original plan (e.g. projects advanced/added, deleted or deferred). A Project Exception form is used to record these changes. Region and OSC program managers must reach consensus on the final list.

The final list is loaded into TEIS. These final lists include the advanced/added and deferred/deleted projects as well as the count of projects advertised by sub program. The lists are summarized by Region and totaled for a statewide measure of delivery for the quarter. Legislators receive a report which encompasses WSDOT and the other departments that report through TEIS.

There is also a quarterly phone call between OSC and the Regions to discuss program delivery. OSC is represented by the State Program Management Engineer, the Director of Program Management, the Assistant Secretary for Planning and Program Management, the Deputy Secretary for Operations, the Assistant Secretary for Field Operations Support, and other WSDOT staff. The regions are represented by the

Regional Administrator, the Region Program Manager, and key staff from project development and construction.

Quarterly program delivery is usually measured by three indicators: projects advertised during the quarter, the final costs of a project as compared to the budget amount, and the biennium-to-date expenditures by program. These indicators are documented for the phone call by charts and lists from TEIS (a projects to ad chart and a list of deferred/deleted projects), data from CPMS (an expenditure spreadsheet and charts of PE and RW expenditures), and data from the Construction Contracts Information System (a report of final contract costs and a summary of contract costs by fiscal year and quarter).

Although the primary focus of these phone calls is on program delivery, there also may be other items discussed such as expenditure needs for a supplemental budget. The goal of these discussions is to identify ways that OSC can help with program delivery and problems to identify problems that may be statewide in nature.

Biennial Program Delivery

When the last quarterly report of the biennium(see preceding section) is loaded into TEIS it may be used to measure the overall delivery of the highway construction program. At that time biennial data is available by subprogram for each Region and with statewide totals. The report includes the number of projects planned, the number of projects advertised, the number of projects advanced or added, and the number of project deferred or deleted. Both actual and planned expenditures may also be charted.

Paths and Trails

RCW 47.30 requires the Department to spend "a minimum of three-tenths of one percent of all highway construction funds" every state fiscal year to provide pedestrian, bicycle and horseback facilities. WSDOT Directive 33-20 provides further guidance on this law.

The amount expended each fiscal year on paving wider shoulders or constructing separate foot/bicycle paths is calculated during the preparation of Plans, Specifications, and Estimate (PS&E) documents. Program Management provides data from CPMS to the Highways and Local Roadways Division for an annual report to executives and LTC staff. This report helps measure how many funds have been directed toward paths and trails work and how much of the directed funding has been spent to date.

Workforce Measures

A variety of reports are used to measure workforce needs and workforce expenditures at both the project and program level. For additional information about reports used for measuring workforce, see:

- http://wwwi.wsdot.wa.gov/fasc/workforce/wfreport.htm

FTE Expenditure and Staffing Report

Every month, the Workforce Management Office of the Finance and Administration Service Center distributes a report of FTE expenditures. The report includes both current month and biennium-to-date expenditures and is circulated to WSDOT executive managers, program managers, and the LTC. The report shows the biennial planned workforce expenditures by subprogram and by organization code.

The report package includes a list of WSDOT new-hires by name, gender and organization code. It lists terminated employees by status (permanent, temporary/seasonal) for the engineering job classes and all job classes. The monthly gains and losses and the biennium-to-date totals are summarized.

Every quarter, a report which shows permanent WSDOT employee gains and losses by organization is distributed with the package. The report shows a five-year history and presents overall percentages of gains and losses to the present.

PE / CE Productivity Report

Workforce Management generates another report called the Preliminary Engineering/Construction Engineering Productivity Report which is used as a productivity measurement tool. This report shows PE work hours in relation to the corresponding contract bid dollars and CE workhours in relation to the corresponding payments to the contractor on a given work order. The report includes all work within the highway construction program.

The report is compiled on a monthly basis and distributed quarterly to the Regional Administrator, the Region Program Manager, and executive management. The report has several sections, a summary page and various detail reports with different sort parameters. One section is sorted by Region, another by Work Item type (i.e., major, resurface, bridge, safety), and another by organization code for the manager assigned to the work order. A total of 66 separate reports are part of this package.

Consultant Usage Report

Workforce Management also produces a Consultant Usage Report which is an informational tool used to capture how much work is actually being done or planned to be done by consultants in the highway construction program. The report is distributed to the Deputy Secretary for Operations, the Regional Administrators, the Assistant Secretaries, and others.

The report shows existing agreement plans and existing agreement expenditures with the corresponding work order number and aging plan. The report also shows new agreement plans and proposed agreements. Information is summarized on a fiscal year basis.

Reporting on Program Status

Program Management uses a number of tools to report on the status of individual projects in the highway construction program or the status of the overall program. The chart below shows these tools, the frequency of the reporting, and the primary audience for the information. Contact OSC Program Management for additional details about a given item.

Reporting Tool	Frequency	Audience
Advance Schedule of Projects	6 months	Legislature, Public, Contractors
TEIS Reports	As needed	Commission, Executives, Legislature
CPMS Reports	As needed	Program Managers
FHWA Reports	Annually	Federal Highway Administration
FMIS Reports	Monthly	Federal Highway Administration

Advance Schedule of Projects

The Advance Schedule of Projects is a list of projects programmed for the upcoming biennium. The project list is published only on the WSDOT Internet Home Page where it is accessed by developers, contractors, contractor associations, periodical publishers, and plan centers. Every month the data is updated to reflect the latest information on programmed projects including the ad date, State Route, Region, estimated cost, project title, type of work, and Work Item Number.

Contractors and other users of the report sometimes contact OSC or the Region with questions concerning specific projects. These questions are generally related to the current ad date or asking for more detail on the type of work.

For the latest copy of the Advance Schedule of Projects see:

- http://www.wsdot.wa.gov/ppsc/programmanagement/cover.htm

TEIS Reports

The Transportation Executive Information System (TEIS) is a computer system used to generate reports about the funding and programs of the Washington State Department of Transportation, the Washington State Patrol, the Department of Licensing, and the Legislative Transportation Committee. Data is provided by the above agencies as requested during legislative sessions and on a regular basis throughout the year. TEIS information may be reported on-screen or through a variety of reporting templates.

The system includes the following applications: Fund Balance and Fee Modeling, Capital Projects and Facilities Reporting, Fiscal and Performance Monitoring, and Transportation Resource Manual. Each month, current financial information from TRAINS and CPMS is loaded into TEIS. OSC Budget Services verifies and reconciles this data and monitors and analyzes the financial status of all WSDOT programs. Every quarter, information about program delivery and performance is loaded into TEIS. Legislators, legislative staff, commissioners, and WSDOT executives can access the data in TEIS.

For additional information about this system, see:
http://www.transinfo.state.wa.us/

CPMS Reports

The Capital Program Management System (CPMS) provides a variety of system reports and on-line screens which can be used to monitor and manage the highway construction program. The system allows reports to be run against either the Production environment or the Book environment. The Production environment is where current project data is input and maintained. Reports run against this environment will capture the most recent changes made to a project. The Book environment is a snapshot of production data at a particular point in time. This snapshot is taken around December of each even-numbered year when the Legislative Book is finalized and around September of each odd-numbered year when the Operating Book is finalized. Reports run against this environment will capture project data as shown in the proposed Legislative Book or from the final approved Operating Book.

Some CPMS reports run automatically on a specified schedule, such as overnight or once each month. Other reports can be generated on demand and allow the user to specify the level of detail or particular type or level of information desired. Still other reports can be created on an ad hoc basis to meet a specific need.

For additional information about CPMS reports, see:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/cpms/reports.htm

FHWA Reports

A number of reports are required by the Federal Highway Administration (FHWA) to monitor the work done on projects which use federal funds. One of these reports is required annually and tracks projects funded by the Statewide Preliminary Engineering System (SPES). This report records the federal-aid number and all work orders associated with that number, obligations for the federal-aid project, expenditures associated with each work order and whether the work order and federal-aid project can be closed.

Another annual report is required by the Surface Transportation Program (STP). The Surface Transportation Program was originally a pilot program which allowed the Department to combine multiple work orders for all project phases funded by the STP under one federal-aid project agreement. The Department reported on these projects until all phases were complete. Since the pilot program was converted to a continuing program, only the PE phase of multiple work orders may be combined. If this has been done (as with a bucket project), the annual STP report is used to document the amount obligated throughout the year by improvement type and fund source for the Department and for the Highways and Local Programs Service Center.

A third report, called the Clause B or Sliding Scale report, is provided to FHWA every two years. This report records the difference between the base federal/state match of funds and the actual match given the state. The actual match varies on a sliding scale that is tied to the amount of public lands in the state. For instance, if the base match is 80% federal and 20% state, but Washington State is given an actual match of 86.5% federal and 13.5% state, then the report is used to show the savings in state funds and to identify the other projects that were funded as a result of these savings.

FMIS Reports

Several reports from the Fiscal Management Information System (FMIS) are used to track the Department's use of federal funds and to track obligations for federallyfunded projects. These reports verify and track obligations for the Department and for the Highways and Local Programs Service Center. Obligations are tracked on a project by project basis and are balanced with the Federal Highway Administration at the end of each month.

FMIS "Step" reports are also used to track the various project stages. These reports track obligations against actual expenditures. They also document projects that have had no action for a long period of time. These reports identify any funding that may be available for use on other projects and for closing completed project phases.

Chapter 6: Providing Customer Support

Overview

Program Management provides support to many different groups and individuals. While many aspects of the job are driven by statute or written requirement, a significant part of what gets done is based on what other people need.

Program Management regularly provides information to those groups and individuals who can in turn satisfy the needs of their organization. This chapter identifies the major customers that Program Management works with and the different kinds of support the office provides. See Appendix E for phone numbers of Program Management staff in the Regions and the Olympia Service Center.

Who the Customers Are

Program Management provides information, services, and products to a broad spectrum of people. The type of information that is requested and the kind of detail that is provided will vary depending on the audience. Program Management's customers can be grouped into the following categories.

Public

The public frequently asks for current information concerning a particular project. They might want to know when a project will start, how construction will affect the flow of traffic near their home or business, or how soon a project will be done. The public may also inquire about the cost of a project although this is not as common as inquiries about the project schedule.

When providing information to the public, it is important to remember that terms and expressions common to WSDOT staff may not be common to this audience. Terms such as ad date, programmed, book, carry forward, PE phase, or PS&E will be meaningless to most members of the public. Be sure to present information clearly, plainly, accurately, and completely.

Media

The media typically requests project-specific information but they also may seek information on other issues. For example, a few years ago a TV network aired a program on a stretch of roadway where there had been a number of fatal accidents. Program Management needed to provide information about the prioritization process and the legislative budget process to help explain why improvements had not yet been made to this road.

Another item to remember is that the media can assist in informing and educating the public on an issue. Program Management may want to utilize such contact with the media to help disseminate information on project schedules or program expenditures. Caution is again advised when discussing issues with the media. It is important to provide complete and accurate information and to make sure information is related clearly and simply. Be aware too that nothing is said is ever off the record. It can end up in print or on the evening news.

Legislature

Individual legislators or LTC staff occasionally contact Program Management for information. Since legislators and their staff have access to project information in the Transportation Executive Information System (TEIS), the information typically requested is something beyond what is in TEIS. For example, a legislator may ask for information on a new project not listed in TEIS or may seek clarification on why a project has not been included in a TEIS list.

Requests for information can be made by phone or in writing. The Department has provided LTC staff with a list of individuals to contact with questions about the highway construction program. The list includes staff in OSC Program Management, Budget Services, Highways and Local Programs, and Regional Program Management. The Department also has developed procedures for responding to written requests for information from legislators or legislative staff. For a copy of the procedures, see page 2-21 of the *Support Services Manual* at:

- http://wwwi.wsdot.wa.gov/docs/manuals/3012.pdf

When discussing project details with legislators or legislative staff, it is important to remember that the information provided needs to be as accurate as possible as it can become the basis of a future commitment.

Transportation Commission

The Transportation Commission can ask for information that is either project-specific or program-specific. The Commission may have a question about an individual project or may need additional details about a certain high-cost or high-profile project. This interest can be based on an inquiry from a member of the public or from an elected official. Commissioners need enough details about the project to fully understand it.

The Commission may also request information at the program or subprogram level. These requests usually come during the budget development process when they are dealing with levels of funding. The Commission will want to have the latest expenditure

information on the entire highway construction program to help make decisions for funding individual subprograms.

Usually, the Commission contacts OSC Program Management to request information. When it is necessary to answer a given request, OSC will contact the appropriate Region Program Management office for assistance in providing the necessary details to respond to the request.

For information about the Transportation Commission, see:

- http://www.wsdot.wa.gov/commission/

Other Agencies

Program Management also responds to requests for information from a number of other agencies. These agencies include railroads, utility companies, cities and counties, and ports. The requests for information can come to Program Management directly or through the Highways and Local Programs Service Center. The agency may have a vested interest in a WSDOT project or may just want to keep the Department informed of one of its own projects. This information exchange allows the Department and the other agency to avoid duplication of effort and conflict of interest as well as an opportunity to pursue advantageous partnerships.

Other agencies may also contact the Department for information or to provide assistance in program development. These agencies include other state highway departments (e.g., Oregon DOT), the Attorney General's Office, the Traffic Safety Commission, the Washington State Department of Fish and Wildlife, or the Washington State Patrol.

Regional Transportation Planning Organizations

The Regional Transportation Planning Organizations (RTPOs) were authorized by the Legislature in 1990 through the Growth Management Act to coordinate transportation planning among local jurisdictions and to develop regional transportation plans. Program Management staff frequently attend meetings of the RTPOs to share and receive information on projects planned for the region it represents. In addition, the RTPOs are the initial point of contact for Program Management when developing and processing amendments or updates to the Transportation Improvement Program (TIP).

For information about RTPOs and a map of regional boundaries, see:

- http://www.wsdot.wa.gov/fasc/KeyFacts/

Contractors and Consultants

Contractors and consultants frequently contact Program Management to request information on upcoming projects. They ask for such information as the timing of the project, the type of work, the approximate size, and the location of the work. Contractors will solicit this information to be able to forecast the amount of construction work they might want to bid on within a given area. Having this information helps them predict their overall workforce, equipment, and material needs in that area. Consultants will request this information to be able to forecast the amount of design work that may be available in a given area. Having this information helps them balance their overall workload with available personnel and assists them in knowing when to expand their market area.

Budget and Program Group

The Budget and Program Group (BPG) is composed of WSDOT executives and meets on a monthly basis to discuss policy level issues related to the budget. Frequently, these meetings generate issues or questions that need to be researched by Program Management. The issues can relate to workforce, subprogram or overall expenditures, expenditure by source of funds or a host of other topics. Response to these requests is provided either through OSC Program Management or through the Regional Administrators.

Internal Customers

Program Management responds to requests for information from many other customers within the Department. Because Program Management is involved with each project within the highway construction program, information needs to be shared with staff in other offices within the Region, with staff from other Regions, and with staff in the Olympia Service Center.

In the Region, Program Management is usually the initial source for information on the status of a project. The program of projects for each biennium is put together based on careful consultation with the Project Development, Maintenance and Construction offices. Each of these offices will have information that is critical for building and delivering the optimal program in the Region. Information will need to continue to be shared throughout the biennium so Program Management can stay abreast of changes or adjustments needed in the program.

What Support Is Provided

Program Management provides support to many different individuals and offices and provides a number of different kinds of support. The support offered includes: program/project data, system support, training, and informational materials.

Program/Project Data

A primary resource that Program Management provides is data. This data may be used in a report, an overhead slide, a written response, a formal memo, a chart, a timeline, a graph, a map, or another kind of document depending on the needs of the customer. For example, the Director of Program Management may ask for help with making a presentation to the Commission to show program expenditures over the biennium. In response, Program Management staff will help develop a chart to show the necessary details. Or, a legislator may ask what projects are planned for construction in his or her legislative district. In response, Program Management staff might generate a report or help create a map to show the project locations. Whatever the request, the goal is always to provide the best possible response to meet the needs of the customer.

At times, Program Management also responds to requests for public information. State law (RCW 42.17) stipulates that all public records must be available for public inspection and copying unless the record falls within a specific exemption. Federal law (Title 23, Section 409, United States Code) states that data developed and maintained for the purpose of evaluating and planning potential safety enhancements on federal-aid highways may not be used as evidence in court proceedings against the Department or the state.

In order to comply with the state statute which requires the release of information and not forfeit the protection provided by the federal law, safety-related data should be released with the following disclaimer printed clearly on it.

> *Under Title 23 United States Code - Section 409, this data cannot be used in discovery or as evidence at trial in any action for damages against WSDOT or the State of Washington.*

If someone has questions about releasing information, they should contact the Public Disclosure Coordinator or the Risk Management Office.

System Support

Staff in the OSC and Region Program Management offices use a number of databases to input and store information about projects in the highway construction program. The office has primary responsibility for developing, maintaining, and enhancing three databases: the Capital Program Management System (CPMS), the Priority Array

Tracking System (PATS), and the Project Summary database. Most staff working in Program Management use one or more of these tools on a daily basis.

In the Olympia Service Center, the Program Management office maintains a help desk for users to call with questions about how to work in CPMS and helps develop new system features to improve system functionality and ease of use. OSC Program Management also provides support for PATS and the Project Summary database.

In the Regions, Program Management staff are often asked for help with system-related issues. They may be asked to update information in the database to reflect current project status, to generate a report to provide information to help answer questions, or to interpret information from the system so that others understand what the data means.

A group called the User Operating Committee (UOC) also provides support to users of CPMS and PATS. The UOC meets once or twice a year to discuss system issues, provide information about system features, answer questions from users, and clarify general issues.

Training

OSC Program Management offers formal training classes for users of CPMS and PATS. These classes help new users get started working in the system and provide tips and pointers for long-time users of the system. In addition, training classes are sometimes put together to meet a need for information on a given topic such as book building, program building, or project prioritization. For information about the training provided, contact the OSC Systems and Analysis Manager.

In the Region, Program Management is often asked to provide informal training. Staff might be asked to explain the importance of aging the project dollars, how to complete a work order, how to request additional funds, or how to access and use CPMS or PATS. These requests can come in a meeting, in the hallway, during a question and answer session, or by someone stopping by the office.

Informational Materials

Program Management provides informational materials as needed to respond to questions that have been asked or to help clarify issues. These can take the form of a formal procedure, a memo of understanding, a letter, or an e-mail.

The OSC Program Management office maintains a website on the WSDOT Intranet with information about what the office does, who works there, scheduled completion dates for critical processes and tasks, information about working in CPMS and PATS,

programming instructions for use during Book Building, information about Project Summary, and details about the Department Project Screening Board.

For information about the OSC Program Management Office, see:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/

Reference Materials

Appendix A: Acronyms

AC	Advanced Construction
ARB	Agency Request Budget
B/C	Benefit Cost
BMS	Bridge Management System
BPG	Budget and Program Group
BR	Bridge Replacement
CAPS	Contract Administration and Payment System
CCIS	Construction Contracts Information System
CE	Construction Engineering
CLB	Current Law Budget
CMAQ	Congestion Mitigation and Air Quality
CN	Construction
CPMS	Capital Program Management System
DPS	Direct Project Support
DPSB	Department Project Screening Board
EBASE	Estimates and Bids Analysis System
EIS	Environmental Impact Statement
ER	Emergency Relief
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FIRS	Financial Information Retrieval System
FMIS	Fiscal Management Information System
FTE	Full Time Equivalent
FY	Fiscal Year
GIS	Geographic Information System
HAC	High Accident Corridor
HAL	High Accident Location
HCP	Highway Construction Program
HSP	Highway System Plan
IM	Interstate Maintenance
LAG	Local Agency Guidelines
LTC	Legislative Transportation Committee
MPO	Metropolitan Planning Organization
MVET	Motor Vehicle Excise Tax
NEPA	National Environmental Policy Act
NHS	National Highway System
NLB	New Law Budget
NMFS	National Marine Fisheries Service
OA	Obligation Authority
OSC	Olympia Service Center
PAL	Pedestrian Accident Location
PATS	Priority Array Tracking System

PE	Preliminary Engineering
PIN	Program Item Number
PS&E	Plans, Specifications, and Estimates
RA	Regional Administrator
RCW	Revised Code of Washington
RTPO	Regional Transportation Planning Organization
RW	Right of Way
SEPA	State Environmental Policy Act
SPAM	Statewide Programming and Management
SPES	Statewide Preliminary Engineering System
STARS	Schedule Tracking and Reporting System
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TARIS	Traffic Accident and Roadway Information System
TDO	Transportation Data Office
TEA-21	Transportation Equity Act for the 21st Century
TEIS	Transportation Executive Information System
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TOPSIS	Technique for Order Preference by Similarity to Ideal Solution
TPO	Transportation Planning Office
TRAINS	Transportation Reporting and Accounting Information System
TRIPS	Transportation Information and Planning Support
UOC	User Operating Committee
USC	United States Code
USDOT	United States Department of Transportation
WAC	Washington Administrative Code
WIN	Work Item Number
WOA	Work Order Authorization
WSBIS	Washington State Bridge Information System
WSDOT	Washington State Department of Transportation
WSPMS	Washington State Pavement Management System
WTP	Washington' s Transportation Plan

Appendix B: Glossary

Actuals The actual expenditures of dollars and workforce on a project. Actual expenditures are tracked by Work Item phase.

Ad Date Date the Construction phase of a project is to be advertised publicly for bids.

Ad Hoc Report Reports which can be written by the user against a file of extracted data from a larger database such as CPMS.

Advance Construction A process which allows work to be performed on approved federal aid projects without having to obligate federal funds.

Advance Engineering Projects programmed in the first biennium of the Legislative Book that can be advanced to the construction phase if other projects are delayed. Advance engineering ensures full delivery of the highway construction program without additional programming action

Aging A monthly plan of how dollars and workforce will be spent for a Work Item phase.

Allocation – Federal An administrative distribution of funds among the states for funds that do not have statutory distribution formulas. For example, Congress may appropriate funds and direct a federal agency to establish rules for distributing the funds. The rules would not be statutory and therefore the distributed funds would be designated as allocations.

Allocation – State The amount of money distributed by the Olympia Service Center to each Region for the purpose of constructing and maintaining the state transportation network. There is one allocation per Region per biennium. Everything else is a target amount. Allocations are usually only for state and federal funds. Special allocations are set up for local reimbursable funds. Allocations rarely change once they are established.

Allotment The amount set aside within an appropriation for a specific purpose. The highway construction program is managed by the allotted amounts within each appropriation. A request must be submitted to OFM prior to spending any unallotted appropriations to allot these funds for use by WSDOT. An allotment plan is developed for each appropriation by month and is provided to OFM. These allotment plans are developed from the expenditure plan in either the Legislative or Operating Book, or may be based upon historical rates of expenditure.

Apportionment The amount distributed to the state for each federal appropriation for the federal fiscal year. An apportionment is based on formulas established by federal law for dividing appropriations among the states.

Appropriation – Federal The amount of funds made available by Congress for expenditure with specific limitations as to amount, purpose, and duration. The federal aid highway program operates mostly under contract authority rules which allow obligations to be made immediately after apportionment or allocation. Federal programs (STP, BR, etc.) are funded by appropriations similar to state appropriations.

Appropriation – State The legislative authorization to make expenditures and incur obligations for a specific purpose from designated resources available or estimated to be available during a specified time period. Expenditures are for both dollar and workforce (FTE). Expenditures may not legally exceed an appropriation. Appropriations have a funding source - state, federal, or local - and are made on a statewide basis. Generally, appropriation figures match the roll-up of the original state-wide program, but the Legislature can appropriate a higher or lower figure.

Authorization – Federal In reference to Congress, a legislative act or empowerment for an agency to implement a particular program. An authorization establishes the upper limit to which funds can be appropriated. In reference to FHWA, an agreement to provide funding to allow the Department to proceed on a project phase. The vehicle for this authorization is a Federal Aid Project Authorization (FHWA Form 120). Any expenditures that occur prior to an authorization are ineligible for federal funding.

Authorization – State An agreement that allows Department resources to be spent for a given project phase. A work order authorization is the vehicle currently used by the Department for these authorizations.

Benefit/Cost (B/C) Ratio A method for prioritizing highway improvement projects. The B/C ratio is determined by dividing measurable benefits by measurable costs for a specific time period, typically 20 years.

Book Environment A term used to describe the WSDOT mainframe environment where CPMS Book data resides. The Book environment is a snapshot of the Production environment at a given point in time. Data in the Book environment is not updated but is used for reporting and for measuring program accomplishment.

Bucket Project

A region-wide project which has funding but no specific work location. In CPMS, a bucket project is identified by the Program Item Number. The first character of the PIN indicates the region and the next six characters uniquely identify the type of work to be done.

Capital Program Management System (CPMS)

A mainframe computer database used to develop and manage the highway and marine construction programs. It allows users to establish and maintain project data and is used to manage and deliver the statewide construction programs. System screens allow the user to input and maintain project data, manage changes to approved projects, and generate reports to monitor program delivery. CPMS interfaces with TRIPS, PATS, and TRAINS. CPMS data is also downloaded to TEIS. See:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/cpms/

Carryforward – Federal

The apportionment balance, in each federal program, thatwill be available for the next federal fiscal year. Carryforward consists of the apportionment balance that accumulated and was not used in the three previous federal fiscal years. Unused apportionment is forfeited if it is older than three previous federal fiscal years.

Carryforward – State

The amount of funds necessary to complete project phases authorized in a previous biennium that will not be available to begin new projects or project phases in a subsequent biennium. Sometimes referred to as work-in-progress (WIP).

Chart of Accounts (M13-02)

A WSDOT manual that contains the valid codes and explains the coding structure used in recording and reporting financial and/or related information at WSDOT. It covers: agreement prefixes, job number prefixes, group category codes, authorization codes, WSDOT table of organization, object codes for expenditures, subprogram and work operation codes, agency financial codes, revenue source codes, balance sheet and general ledger codes, appropriation codes, and organization codes. See:

- http://wwwi.wsdot.wa.gov/FASC/Accounting/

Construction Contracts Information System (CCIS)

A mainframe/micro-computer system designed to track all construction projects and generate reports. The initial setup of a contract is extracted from CAPS. A majority of the data is entered into the system by Project Engineers. Data is stored on the mainframe. To generate reports, data is downloaded to a SQL server which anyone can access. CCIS generates the Weekly Statement of Working Days and Change Orders. The system creates the forms for these so a preprinted form is not needed.

Construction Manual (M41-01)

A WSDOT manual providing procedures and methods that are acceptable for the construction of state highway projects under engineering supervision of the Department. It includes detailed guidelines for the documentation of work received and the keeping of records which are essential to proper accounting for the adequacy of work and the payments made. The *Construction Manual* is a reference book of instructions consistent with the *Standard Specifications*. Program Management uses information in this manual relating to contract administration and change order processing. For a copy of the *Construction Manual*, see:

- http://www.wsdot.wa.gov/fasc/EngineeringPublications/

Contract Administration and Payment System (CAPS)

A mainframe computer system that allows WSDOT to manage the data used to track and report on construction contract progress. The work order manager uses the system to initiate payments to be generated to prime contractors and escrow agents. Program managers might check CAPS to see how individual pay items have been set up on a contract. For more details, refer to the *CAPS Manual (M 13-01)*.

Current Plan

The amount currently planned to be spent in dollars and workforce for a project phase.

Cut-off

Time during the month when a system is shut down so that actuals for the preceding month can be applied and reaging can be accomplished. (Also called monthend cut-off.)

Decision Package

A request to the Legislature for an increase or decrease in dollars and/or FTEs from the current authorized budget level. These requests are submitted to the program managers for review by the organizational managers.

Department Project Screening Board (DPSB)

The group of WSDOT executives responsible for reviewing and approving major changes to projects in the highway construction program.

Design Manual (M22-01)

A WSDOT publication providing policies, methods and procedures recommended for developing projects. The manual provides specific design elements, such as horizontal curve design and formulas for signal design, and also general guidance about hearings, permits, structures, etc. Program managers use the manual during the development of project summaries to ensure consistency with applicable standards of practice. For a copy of the *Design Manual*, see:

- http://www.wsdot.wa.gov/fasc/EngineeringPublications/

Direct Labor — Work which contributes to the completion of a product and which can be charged against a particular project/Work Order.

Direct Project Support — Work or services that contribute to the delivery of the highway construction program but are not assigned to any one project.

Due Year — The year pavement rehabilitation is due according to the Washington State Pavement Management System. For programming purposes, a due year is considered to be the year the pavement rehabilitation is due as well as the following two years; a future due year is any year more than two years after a due year; a past due year is any year prior to the current year.

Estimates and Bid Analysis System (EBASE) — A WSDOT SQL server application that manages estimates and contractor bids for construction projects. It produces project estimates, breaks out contract agreement amounts, construction engineering estimates and sales taxes, and provides a summary by fund source (federal, state, etc.). Region program managers use EBASE to prepare work order authorization forms. OSC program managers use the PE Summary produced by the system for reviews prior to work order authorization or submittal of federal-aid agreements. For more information, see

- http://wwwi.wsdot.wa.gov/eese/CAE/pse/ebase2/suppl.htm

Federal Highway Administration (FHWA) — The section of the United States Department of Transportation with jurisdiction over the use of federal funds for state highway and local street and road improvements.

Financial Information Retrieval System (FIRS) — A client-server computer application which allows the retrieval of accounting, budgeting, and work order information from TRAINS. The user selects criteria for querying the database and information is placed in an Excel spreadsheet for a quick and easy look at expenditures. For more information, see:

- http://wwwi.wsdot.wa.gov/FASC/Accounting/firs.pdf

Fiscal Management Information System (FMIS) — A nationwide accounting system containing data related to federally funded highway projects. The data is summarized in a variety of ways and used by FHWA for planning and executing agency programs, evaluating program performance, and depicting financial trends and requirements related to current and future funding. The information is maintained on a central mainframe computer and updated via microcomputers. Fiscal information is input into FMIS by staff in OSC Program Management, Highways and Local Programs, and

	Finance and Administration. FMIS is used to obtain funding approval from FHWA and to track and manage federally-funded projects.
Fiscal Year –Federal	The twelve month period from October 1st through September 30th by which Congress makes appropriations and in which obligation authority can be used by the State.
Fiscal Year – State	The twelve month period from July 1st to June 30th for which WSDOT plans the use of its funds. (Fiscal year 1999 begins July 1, 1998 and ends on June 30, 1999).
Full Time Equivalent (FTE)	A unit of measurement for workforce. For planning purposes, one FTE is equal to approximately 1800 hours of work in a fiscal year regardless of whether that work is performed by a full-time, part-time, or temporary employee
Geographic Information System (GIS)	A computerized geographic information system used to store data. Data may be used with GIS if the data includes the Accumulated Route Mile (ARM) or State Route Mile Post (SRMP). Global Positioning System (GPS) technology provides a means of collecting data and is an alternative to location by ARM or SRMP. The primary desktop tool to view and analyze GIS data is ArcView software. Program managers may use GIS information when preparing or reviewing a Project Summary and when entering deficiency data in CPMS.
High Accident Corridor (HAC)	A highway corridor one mile or greater in length where a five-year analysis of collision history indicates that the section has higher than average collision and severity factors.
High Accident Location (HAL)	A highway section typically less than .25 mile where a two-year analysis of collision history indicates that the section has a significantly higher than average collision and severity rate.
Highway Construction Program (HCP)	The comprehensive two-year program and six-year financial plan of highway improvement and preservation projects selected by priority for each Region.
Highway System Plan (HSP)	A WSDOT planning document that addresses the state highway system element of the Washington Transportation Plan. The HSP defines service objectives, action strategies and costs to maintain, operate, preserve, and improve the state highway system for 20

	years. It is the basis for the state highway element of the six-year plan and the biennial state highway program. It is periodically updated to reflect completed work, changing transportation needs, polices, and revenues. It compares highway needs to revenues, describes the "financially constrained" costs of the highway programs, and provides details of conceptual needs in the Improvement program. For more information, see: • http://www.wsdot.wa.gov/ppsc/planning/
Improvement Type	A general definition of the type of work that will be accomplished by a Program Item.
Indirect Costs	Activities which support direct labor costs but cannot be charged against a particular project or activity.
Inflated Dollars	Value of the estimated dollars inflated from the estimate date to the mid-point between the phase start and phase completion dates (for RW and CN phases only).
Inquiry	Mode which allows a user to view data in a computer system, without allowing the user to change or update data.
Legislative Book	List of projects by subprogram developed by Program Management, approved by the Transportation Commission, and submitted to the Legislature during the odd- year session when biennial budgets are set.
Local Agency Guidelines (M36-63)	WSDOT publication that provides local agencies with statewide policies and standards to follow when using Federal Highway Administration funds for transportation projects. The manual provides information to help Washington's public agencies plan, design, construct, and maintain transportation facilities. It describes funding procedures and the use of federal Emergency Relief funds. For a copy of the *Local Agency Guidelines*, see: • http://www.wsdot.wa.gov/fasc/EngineeringPublications/
Lowest Life Cycle	In terms of highway pavement preservation, the point in a pavement's life cycle where optimum pavement life has been achieved and the least cost to resurface has been reached. Pavements that have gone beyond this optimum point typically incur more costs to rehabilitate.
Metropolitan Planning Organization (MPO)	The agency designated by the Governor to administer the federally required transportation planning process in metropolitan areas with populations over 50,000. The MPO is responsible for the 20-year long-range plan and the Transportation Improvement Program (TIP).

Milestone	The date which marks a significant activity to be accomplished on the project such as: PE funds authorized, design report approved, or project to ad.
Monthend Process	A monthly process in CPMS during which the system is not available for update and actual expenditures are posted, planned dollars are reaged, and reports and generated.
National Highway System (NHS)	A network of roadways designated by Congress that consists of all Interstate routes, many urban and rural principal arterials, and strategic highways and highway connectors. Over 3000 miles of WSDOT highways are designated as NHS routes.
New Start	A project phase which has been planned or programmed for the first time.
Nightly News	The Change Summary Report from CPMS which itemizes changes in scope, schedule, or cost to approved Program Items. It is distributed to OSC Program Managers daily. Regions review changes made in CPMS through this report.
N Line	A finance line in CPMS for which funds have not yet been authorized or requested.
O Line	A finance line in CPMS that has overrun. An O-line is caused when expenditures applied against a finance code exceed the amount authorized for the finance code.
Obligation	A commitment by FHWA to reimburse the state for approved expenditures.
Obligation Authority (OA)	The limitation by the federal government on the amount of federal apportionment and allocation that can be obligated during a specific time period, normally a federal fiscal year. OA does not affect the amount of apportionment or allocation, it just controls the rate at which these funds may be used. It is not the same as expenditures.
Operating Book	Final list of projects by subprogram which has been approved by the Legislature during the odd-year budget session and to which funds have been appropriated.
Org Code	Six-digit code designating an organizational area of responsibility and by which workforce is planned and against which labor and dollars are expended.

Original Plan — A Program Item's proposed budget as included in the Legislative Book and approved by the Transportation Commission. Originals are set in CPMS when the Operating Book is established. All changes in project cost, scope and schedule are measured against the originals for determining approval authority required and measuring accuracy of projects as budgeted.

Overprogramming — The process of adjusting the CPMS database by an acceptable percentage over the allocation for a particular program. It provides flexibility for handling unanticipated project cost changes or project delays. It is accomplished by advancing projects into the biennium.

Override — A change made by the user which circumvents system-generated standard values for schedule, workforce, or dollars.

Overrun — Expenditures charged to a specific finance code which exceed the amount authorized for the finance code and which cause the total work order expenditures to exceed the authorized amount.

Overstatement — Expenditures charged to a finance code which exceed the amount of funds authorized for the finance code but which do not cause the total work order expenditures to be overrun.

Plans Preparation Manual (M22-31) — A WSDOT publication which provides instruction and guidance for the preparation of right of way plans, contract plans, special provisions, and estimate packages for highway construction projects. The manual also provides the standards used in the preparation of these plans using Computer Aided Drafting and Design (CADD). Useful information for Program Management is the documentation the manual provides on the various amounts of Construction Engineering and Contingency costs. For a copy of the *Plans Preparation Manual*, see:

- http://www.wsdot.wa.gov/fasc/EngineeringPublications/

Plans, Specifications, and Estimates (PS&E) — The project development activity that follows project definition and culminates in the completion of contract ready documents. These include final plans, specifications, and engineering estimates.

P Line — A finance line in CPMS for which funds are pending authorization.

Preconstruction — All project phases which precede the construction phase. This includes preliminary engineering and right of way acquisition.

Preliminary Engineering (PE) — A term used to describe all work, including project establishment and route selection, through the PS&E review. Approval to proceed with

a Work Item phase is started by a setup of funds through a Work Order Authorization.

Priority Array — A collection of all needs identified in the Highway System Plan, listed by severity ranking, and prioritized based on the methodology adopted by the Department to meet the requirements of RCW 47.05.

Priority Array Tracking System (PATS) — A centralized database that allows tracking of highway deficiencies and their solutions. The system is designed to ensure that WSDOT addresses the highest ranked transportation needs. Deficiencies are tracked for each action strategy in the Highway System Plan. The system stores over 30 different deficiency groups and provides the ability to match these deficiencies with programmed projects identified in CPMS. The system is used to identify deficiencies addressed by projects during program building and to provide documentation if no solution is provided for a high ranking deficiency in the current biennium. See:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/pats/

Production Environment — A term used to describe the WSDOT mainframe environment where CPMS Production data resides. Data in the production environment is actively updated and maintained by users and represents the most current information on a project.

Program — (Noun) A plan for completing a group of projects having specified schedules and specific costs. See *Highway Construction Program*. (Verb) To obtain approval to complete a project as part of the highway construction program. The Transportation Commission approves the highway construction program in the form of the Legislative or Operating Book. Projects not included in the Book can be programmed individually by the Commission, the Transportation Secretary, or the Program Management Engineer.

Program Item — A project in the highway construction program which identifies specific work proposed for funding and completion. It is used to establish legislative and program commitments.

Program Item Number (PIN) — A unique seven-character identifier of a project in the highway construction program. The first character is a number and indicates the Region. The next three characters are also numbers and designate the State Route. The last three characters -- two numbers and one letter -- are unique identifiers assigned by the Region. For example, PIN 310188A is in the Olympic Region on SR 101 and uniquely identified as 88A.

Program Manager In the Region, the individual responsible for developing the Region's component of the highway construction program. In the Olympia Service Center, the individual responsible for budget development, execution, and justification of one or more subprograms within the highway construction program.

Project Manager The individual responsible for managing the accomplishment of work on a project phase.

Project Summary A document which comprises the project definition, design decisions, and environmental review summary. The document replaces the project prospectus, design report, and an environmental database.

Project Summary Database A centralized database used to prepare and review project documentation prior to approval for programming. Each Region utilizes a copy of the database to prepare project definitions, conduct environmental reviews, and make design decisions for a project. Offices in the OSC are charged with monitoring these work reviews and may comment on the documentation. See:

- http://wwwi.wsdot.wa.gov/ppsc/pgmmgt/projsum/

RCW 47.05 A section within the Revised Code of Washington which establishes "that investment of state transportation funds to address deficiencies on the state highway system be based on a policy of priority programming having as its basis the rational selection of projects and services according to factual need and an evaluation of life cycle costs and benefits and which are systematically scheduled to carry out defined objectives within available revenue." It also covers functional classification of highways, the six-year program, allocation of funds, and priority selection criteria for the improvement program. For the complete text of the RCW, see:

- http://www.leg.wa.gov/wsladm//rcw.htm

Reaging The redistribution of planned expenditures of dollars and workforce over each month of a Work Item phase.

Reappropriation Funds that were appropriated in a biennium that were not able to be used may be appropriated for the same purpose in the following biennium. The funds are then designated as a reappropriation.

Regional Transportation Planning Organization (RTPO) A planning organization authorized by the Legislature in 1990 aspart of the Growth Management Act. The RTPO is a voluntary organization with representatives from state and local governments and is responsible for coordinating transportation planning activities within a region.

Remaining Plan The expenditures remaining for a project phase. Actual expenditures subtracted from planned expenditures equal the remaining plan. The remaining plan is what is aged/reaged.

Responsible Org The organization code for the Work Order Manager assigned to monitor the funding needs and scope changes to a project.

Right of Way Work Item phase related to acquisition of land, beginning with right of way funds authorization and usually ending with the right of way clear milestone.

Scenario A term used in CPMS to indicate a selection of data using a list of Program Items or Work Items which meet a selected profile. A scenario can be used as a tool for creating specialized reports using on-request report formats.

Schedule Tracking and Reporting System (STARS) A client-server based system developed by the Northwest Region for projects within their highway construction program. It is used to monitor and assess project schedules and resource needs both at the project and program level. The system utilizes Microsoft Project, Microsoft Access, SQL Server and the WSDOT mainframe. The system replaced the "Sunshine Report" schedule tracking and reporting system.

Soft Match A funding tool that allows WSDOT, by using toll credit, to bill FHWA for up to a 100% of the eligible expenditures on a project.

Stage of Estimate A two-character field used in CPMS to indicate the financial status of the project. The first character indicates the status of funding, and the second character indicates the status of the work at the time the estimate was prepared.

Statewide Transportation Improvement Program (STIP) A planning document that includes all federally funded projects and other regionally significant projects for a three-year period. The STIP is a compilation of all projects that are in the Transportation Improvement Programs (TIPs) developed by the regional planning organizations (MPOs and RTPOs). A new STIP must be developed every two years or less and is approved jointly by FHWA and FTA for compliance with statutory requirements and financial feasibility.

Surface Transportation Program (STP) A federal program established by Congress in 1991 which provides a source of federal funding for highway and bridge projects, including projects in other transportation modes.

Target The dollar amount which is expected to be available for program

funding within the biennium.

Technique for Order Preference by Similarity to Ideal Solution (TOPSIS)

An algorithm used by WSDOT in the process of ranking proposed highway mobility (I1) projects. Once projects are scored, TOPSIS places the scores in an evaluation matrix, normalizes the scores, multiplies each score by a relative weight, formulates a theoretical "ideal-best" project and a theoretical "ideal-worst" project, and prioritizes proposed projects. Regional program managers normally coordinate the input of various data elements by their planning, traffic and environmental offices.

Threshold Break

The point at which an approved Program Item varies from an established range for changes. A single change or the cumulative effect of smaller changes can break a threshold and necessitate a change approval.

Title 23, United States Code

Federal legislative, also referred to as Public Law 104-205, which describes what Congress considers to be permanent substantive laws governing the Federal-Aid Highway Program. It need not be reenacted in each new highway act. (See TEA-21). Each highway act specifies which sections of Title 23 are amended, repealed, or added. Title 23 does not contain requests for studies or special projects and most authorizations are not codified. Thus, the code effectively contains only those continuing provisions of the highway law.

Traffic Accident and Roadway Information System (TARIS)

A computer system under development by the Department. When complete, it will provide access in a client-server database environment to highway inventory, traffic and accident data that is currently stored in the Transportation Information and Planning Support System (TRIPS). See *TRIPS*.

Transportation Equity Act for the 21st Century (TEA-21)

Federal legislation passed on June 9, 1998, which authorizes highway, safety, transit and other surface transportation programs for the next six years. Subsequent technical corrections in the TEA 21 Restoration Act have been incorporated; thus, the two are jointly referred to as TEA-21. TEA-21 builds on its predecessor the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which was the last major authorizing legislationfor surface transportation. The new act describes eligibility requirements, contains funding authorization levels for the next six years by program, and specifies how the highway obligation limitation will operate. For more information, see:

- http://www.fhwa.dot.gov/tea21/

Transportation Executive Information System (TEIS)

An information system used to monitor and track activities which receive funds from the transportation budget. These activities are accomplished by the WSDOT, the Washington State Patrol, the Department of Licensing, and the Legislative Transportation Committee. The system provides read-only access to information on capital construction projects, workforce, financial status, transportation funds and accounts, and performance measures. See:

- http://www.transinfo.state.wa.us

Transportation Improvement Program (TIP)

A three-year transportation investment strategy required from Metropolitan Planning Organizations by Congress. It includes all projects in the three-year period expected to be financed by federal funds. All federally funded or regionally significant projects must be included in the TIP.

Transportation Information and Planning Support (TRIPS)

A mainframe computer system designed to provide engineering, maintenance, planning, and accounting personnel with highway inventory, traffic and accident data. The system includes both current and historical information about the state highway system. A TRIPS user can view data through on-line screens, generate screen prints for hard copies, print standardized batch reports or use a specialized computer language to develop customized reports. TRIPS is used to obtain geometric data, accident data from the Collision Analysis Report System (CARS), and traffic volumes for preparing project definitions. For more information, see the *TRIPS User Guide*.

Transportation Reporting and Accounting Information System (TRAINS)

A computerized ledger-based accounting system which is the core system used for work order expenditures. TRAINS was installed on the WSDOT mainframe on 7/1/1991. Region Program Management staff use TRAINS to check work order setups, overruns, and underruns, to obtain organization (org) code and control section data, and to check federal-aid agreement numbers and details. They also use TRAINS to track agreement costs, agreement status, and vendor and manager information. OSC Program Management staff use TRAINS to evaluate work order authorizations, to check work order setups and fund source authorizations, and when modifying federal aid agreements. For more information, see the *TRAINS User Manual (M13-03)*.

Unallotment

That part of an appropriation which is available for allotment but which the Department does not plan to spend. It is equal to that part of each appropriation for which the Department has expenditure authority but which exceeds the approved plan.

Unanticipated Receipt	Funds that are received from any source that were not anticipated in the transportation budget. Approval to expend these funds is made by means of a Request for Unanticipated Receipts. The Governor has the authority to approve the allotment of such funds within the guidelines specified in RCW 43.79.270.
Underprogrammed	A subprogram is underprogrammed if its current biennial expenditure plan is less than its allocation.
Underrun	Negative expenditures in CPMS which occur when expenditures are backed out and the reduction exceeds the actual expenditures. The term is also used in monitoring the program. In this case, underrun refers to the condition when actual expenditures made in a month or in the total months-to-date are less than the anticipated expenditures.
V Line	A finance line in CPMS for which funds have been authorized. Funds authorized with V lines are planned to be spent after funds authorized with Y lines.
Washington State Bridge Information System (WSBIS)	A client/server based system which replaced the State of Washington Inventory of Bridges and Structures (SWIBS). This database includes National Bridge Inventory data that WSDOT is required to submit to FHWA quarterly. It includes inspection data used to implement WSDOT's Bridge Management System and is the official repository of city and county bridge data. WSBIS is the source for the "Bridge List" published by the Bridge and Structures Office every biennium which shows the name, SR, milepost, length, vertical clearance, structural type and identification number of all bridges on Washington highways. The Bridge Preservation Office maintains the WSBIS data file.
Washington State Pavement Management System (WSPMS)	A computer system which stores data about the condition of all the highways in the state and uses calculations to forecast when pavement is due for repaving. Information available includes the latest field review, past contracts and the result of calculations for every tenth of a mile. Calculations are used to determine whether a given section of pavement is a "past due", "due", or "future due" preservation need.
Washington's Transportation Plan (WTP)	A WSDOT planning document developed for the Transportation Commission in coordination with local governments, regional agencies, and private transportation providers. It addresses the future of transportation facilities owned and operated by the state and those the state does not own but has an interest in. It presents a 20-year

	vision for these various modes of transportation. It identifies significant transportation investments that are needed to maintain the system, improve safety, provide mobility to a growing population, and keep the economy moving. These transportation needs are defined by service objectives which are specific, desired outcomes for each mode of transportation. Each service objective is supported by one or more action strategies. For a copy of the current document, see: • http://www.wsdot.wa.gov/ppsc/wtp
Workforce	Resources available in terms of labor to deliver the highway construction program.
Work Item	An element used in CPMS to describe how the planned work is to be carried out on a project. It carries details about the project schedule, cost, and workforce for each phase.
Work Item Number (WIN)	A unique seven-character identifier for the work within each project phase (PE, RW, and CN). The first character is a letter and indicates the Region. The next three characters are numbers and designate the State Route. The last three characters -- two numbers and one letter -- are unique identifiers assigned by the Region. For example, WIN F09086A is in the Eastern Region on SR 090 uniquely identified as 86A.
Work Item Type	A general definition of the type of work to be performed by a Work Item. It is derived from the Improvement Type code entered for the Program Item. The valid Work Item Type codes are: 1-Major, 2-Overlay, 3-Bridge, 4-Safety, 5-Landscape, 6-Unique. (Work Item Type 5 is no longer used.)
Work Order	The tool by which expenditures are authorized for specific work on a Work Item phase. The work order establishes the central collection point (cost center) for recording all expenditures associated with activities on a Work Item phase.
Work Order Authorization	The document used to establish funding for a particular phase of work. A separate work order authorization is required for each phase: preliminary engineering, right of way, and construction.
Work Order Manager	The individual responsible for managing the project funds and scope changes.
Y Line	A finance line in CPMS for which funds have been authorized.

25th Month The accounting period following the last month of a biennium which is used to record expenditures posted after the biennium close but which should be charged in the biennium.

Appendix C: Work Order Authorization Form and Guidelines

Washington State Department of Transportation

WORK ORDER

WORK ORDER: MS 3222 **DATE SENT:** Mar 24, 1998 **DATE REC'D:** Mar 24, 1998

WORK ITEM: H00011A **WOA TITLE:** Roadway Design Software Maintenance

PIN: 000011A **WORK DESC:** Maintenance and Support of CAICE

PHASE: ☒ PE ☐ RW ☐ CN **ORG# / MGR:** 303080/Jim Michal

SOURCE OF FUNDS: ☒ State ☐ Federal ☐ Local ☐ TIB ☐ ER **COUNTY(S):** 34 THURSTON **SR(s):** From: **MP:** To:

WOA TYPE: ○ Perpetual ◉ Biennial

Reimbursable From:

Receivable Agmt #	% / AMT	Date Executed

PREVIOUS AUTHORIZATION: $0.00

Group Category:

01 Work Done Contractor	
02 Work Done Others	
Payable Agmt #	
03 Engineering	
04 State Force Work	180,000.00
05 Material Furnished	
06 Contingencies	
07 R/W Acquisition (need true cost)	
08 R/W Other	
99 Vendor Supplied Serv. & Matls.	
NEW TOTAL AUTHORIZATION	**$180,000.00**

FA No.	F A %	FA Approp	FHWA Auth Date

RW cert to OSC ○ Y ○ N/A STIP Ref:

Design Approv NEPA

The CE / PE costs equal % of current est. construction

PIN	Sub Pgm	Fund Acct	Legis Approp	Finance Codes	Amt. Change	Control Section	Distr % by Cont. Sect
000011A	P3	108	A10	AA	180,000.00	3400NT	100

Notes: New Setup $180,000.00

TOTALS : Amt Change $180,000.00 **Distr %** 100 %

WORK ORDER JUSTIFICATION

New setup to fund CAICE system maintenance for the 97-99 biennium

ACCOUNTING NOTES :

COPY ☐ ☐ FA LIAISON ☐

WOA INITIATED BY: Org Manager Date

REGIONAL CONCURRANCE: Regional Administrator/ Designee Date

EXPENDITURE AUTHORIZATION BY: 1. Program Manager / Designee Date

2. Program Manager / Designee Date

CREATED BY Rev 5/6/96 SAB

Filling Out the Form

The Work Order Authorization form as shown on the previous page is provided by OSC Program Management. Regions can create a similar form using any software application that meets their needs, but the form must be consistent with the standard form. The following pages describe how to complete the required sections of the form.

Work Order: Enter the work order number. For on-going work orders, use the work order number assigned to the associated WIN/phase. For new starts, see the Chart of Accounts for prefix selections and descriptions.

Date Sent: Enter the date the work order was sent to OSC. This is not necessarily the same day the work order was filled out.

Date Received: Regions should leave this field blank. OSC Program Management will enter the date the work order was received.

Work Item: Enter the Work Item Number as assigned in CPMS.

WOA Title: Describe the project work. This should be the same as the Work Item title in CPMS.

PIN: List all PINs linked to the Work Item/phase in CPMS.

Work Desc: Enter a brief description of the work associated with the fund request. (This can be the same as the Work Item description entered in CPMS).

Phase: Check either PE (Preliminary Engineering), RW (Right of Way), or CN (Construction) to match the phase for which you are creating the work order. (Only one phase is allowed per work order).

Org # / Mgr: Enter the Organization Code and the name of the Organization Manager responsible for managing the project phase. (OSC Accounting Services will forward documentation needed to manage the work order to this office.)

Source of Funds: Indicate the funding source for the work order authorization by checking the appropriate boxes.

- **State:** Check this box if funds are to be paid by Washington State. Do not check State if the only State funds are a match for federal dollars.
- **Fed:** Check this box if funds are to be paid through participating FHWA dollars. (Non-FHWA federal dollars are considered local dollars for work order purposes.)
- **Local:** Check this box if funds are to be paid by sources other than Washington State or FHWA (e.g., local governments, developers, other governmental agencies).

- **TIA:** Check this box if Transportation Improvement Account funds are planned for the project.
- **ER:** Check this box if the project is eligible for federal Emergency Relief reimbursement.

County(s): List all the counties within the project limits.

SR(s): List all State Route numbers associated with the project work.

From/To MP: Enter the beginning and ending mile post for the project to the nearest hundredth of a mile.

WOA Type: Check the Perpetual box for ongoing work orders. Check the Biennial box for work orders that are to be zeroed out at the end of the biennium, as is the case with most Administrative work orders. Then complete the appropriate section below.

- **Reimbursable From:** If local funds are being used, indicate the contributing agency(s).
- **Receivable Agmt #:** Indicate the receivable agreement number associated with the local funds.
- **% / Amt:** Enter the percentage amount or the dollar amount specified in the terms of the receivable agreement.
- **Date Executed:** Enter the date the agreement was executed (Do not send in a work order if this date is not known since the work order can' t be set up in TRAINS until the agreement has been executed.)

For FA Projects Only: Complete this section only for federal aid projects.

- **FA No.:** Enter the federal aid project number. If unknown, leave the field blank.
- **FA %:** Regions should leave this blank. OSC Program Management will enter the percentage of federal participation. This prorated share is based on the federal fund source. The various participation share values are subject to change. (If soft match is being used, show FA% as 100% and indicate the federal pro-rata share that would apply if soft match were not being used.)
- **FA Approp:** Regions should leave this blank. OSC Program Management will enter the federal aid appropriation number. This number can be found in the Chart of Accounts based on the fund types used on the project phase.
- **FHWA Auth Date:** Regions should leave this blank. OSC Program Management will enter the date of federal authorization. This is the date the FHWA signs the federal aid authorization form.
- **RW Cert to OSC:** For new federal aid projects, check YES if Right of Way certification has been submitted to the OSC Real Estate Services Office. Check N/A if certification is not required.
- **STIP Ref:** Enter the STIP project identification number. This is required for all federal aid projects.

- **Design Approv:** Enter the date that design approval was given (the design file approval date).
- **NEPA:** Enter the date of National Environmental Protection Act (NEPA) approval.

Previous Authorization: Enter the total previously authorized dollars (the balance forward from the latest work order processed). Enter zero if the project is a new start.

Group Category: Enter the amount of the total authorization that falls within each group category. (See the Chart of Accounts for additional details about group categories.)

- **01 - Work Done Contract:** (For the CN phase only) Enter the amount of anticipated payments to contractors, including sales tax to be paid through CAPS or by voucher.
- **02 - Work Done Other:** Enter the amount of anticipated payments for work performed by parties other than WSDOT or contractors. Enter a corresponding payable agreement number associated with the work. The agreement must be set up in TRAINS before the work order is processed.
- **03 - Engineering:** Enter the amount of expenditures authorized by the location or project engineer' s office for design or location work, review of plans, and all other related costs. This category can also be used for engineering work performed for a customer in association with other work per a reimbursable agreement.
- **04 - State Force Work:** Enter the amount of expenditures by WSDOT personnel. This includes labor, equipment, and materials costs. It excludes location engineering and vendor supplied services and materials. For the PE phase, enter the state force labor, regardless of the amount. There is no limit except as set by the amount approved in the budget. For the CN phase, enter the amount of construction labor. There is a limit to how much state force labor can be spent on construction activities for a particular item of work (see RCW 47.28.030). The work must be estimated to cost less than the current limit of $50,000.
- **05 - Materials Furnished by State:** (For the CN phase only) Enter the estimated value of material furnished by WSDOT to the contractor or to the local agreement.
- **06 - Contingencies:** (For the CN phase only) Enter the amount of the dollar reserve to be used for other group category overruns on work within the original scope of the project. This reserve must be depleted before the total authorization can be increased.
- **07 - RW Acquisition:** Enter the amount to be used for the purchase of real property. Submit a copy of the Preliminary Funding Estimate (PFE) with the work order. The PFE lists all the parcel numbers to be acquired with or affected by the project.
- **08 - RW Other:** Enter the costs associated with work performed by both the Region and OSC Real Estate Services Office. This includes property appraisals and administrative costs associated with the purchase of property.
- **99 - Vendor Supplied Services and Materials:** Enter the costs associated with vendor supplied services and materials which the Department has authority to incur but which do not fit into other group categories. This does not include materials purchased for installation by state forces which would fall under group category 04.

New Total Authorization: Enter the sum total of the Previous Authorization amount plus or minus the group category amounts.

CE/PE Costs: Enter the percentage of Construction Engineering or Preliminary Engineering costs associated with the project.

PIN: List each Program Item Number linked to the Work Item/phase.

Subpgm: Enter the corresponding subprogram code for each PIN listed.

Fund: Regions should leave this blank. OSC Program Management will enter the accounting fund source.

Legis Approp: Regions should leave this blank. OSC Program Management will enter the legislative appropriation code from the Chart of Accounts.

Finance Codes: Enter the finance code(s) associated with each PIN as shown in CPMS.

Amt Change: Enter the amount by which the work order is increasing/decreasing for each PIN.

Control Section: Enter the control section where expenditures are anticipated. This information can be found in TRIPS.

Distr % by Control Sect: Enter the distribution percent by control section for how the remaining expenditures will be spent on each PIN for labor distribution (TRAINS groups 60 and 70). This is not necessarily the split by PIN as shown in CPMS. See the example below.

⇨ **Example:** A work order is set up with one PIN and an authorization amount of $100,000. After $50,000 is spent on this PIN, a second PIN is added to the work order with an authorization amount of $100,000. In CPMS, the cost screen will show the total authorization at the WIN/phase level as $200,000 with a split of 50% for PIN 1 and 50% for PIN 2. When completing the work order, do NOT enter a distribution percent of 50% for each PIN. Instead, calculate the distribution percent based on the remaining planned dollars. Since $50,000 have already been spent, the remaining dollars after adding the second PIN are $150,000. Of this total, $50,000 (or 33.3%) will be spent on PIN 1 and $100,000 (or 66.7%) will be spent on PIN 2.

Notes: Enter any notes or instructions pertinent to processing the work order. This section should be reserved for Program Management and CPMS information. (When using the FileMaker Pro form, this field will automatically calculate and display the amount of authorization change.)

Totals – Amt Change: Enter the sum total of the separate change amounts entered for each PIN. This total must equal the total increase or decrease as a result of the separate group category amounts.

Totals – Distr %: Enter the sum total of the separate distribution percent amounts entered for each PIN. This total must equal 100%.

Work Order Justification: Enter a complete and logical explanation of the requested changes to the work order. When requesting funds for Right of Way acquisition, list the Right of Way sheet titles and the approval dates for the parcels to be acquired. The justification should be clear and complete so that a reviewer can understand what needs to happen and why. Keep in mind that the reviewer in OSC may not know the project details as well as they are known in the Region.

Accounting Notes: Enter any additional details or accounting instructions that need special emphasis. Information should be included here to help OSC Project Support Services set up correct information in TRAINS related to the requested changes.

WOA Initiated By: The individual initiating the work order should sign and date the form. This could be the Region Program Manager or Work Order Manager.

Regional Concurrence: The Regional Administrator (or designee) should sign and date the form to show concurrence with all aspects of the authorization request –including expenditure authorization, justification, and funding source.

Expenditure Authorization By: If the Region has signature authority for the given work order, the Regional Administrator (or designee) should sign and date the form. If OSC has signature authority, the appropriate Program Manager should sign and date the form after processing is complete.

Copy Distribution: This is an optional field for routing purposes. OSC Program Management uses this field to fill in the names of people in OSC to receive the form.

Created By: This is an optional field. Use it to fill in the name (or initials) of the individual who prepared the form or the person to contact in the Region.

Appendix D: Work Order Closure Form and Guidelines

Washington State Department of Transportation

Work Order Closure Request

Work Order No.	Title	
Federal Aid No.(s)	Responsible Org.	Org. Manager

Work Order Closure Check List *(To be completed by Requestor)*

☐ Yes ☐ No Have all the necessary adjustments (Journal Vouchers) been made to the appropriate Group and Group Category?

Work By Contractor (Grp Cat 01)

☐ Yes ☐ No Has retainage been released?

☐ Yes ☐ No Are the expenditures for Prime Contractor in balance with the dollar amount as shown on the Headquarters Final Estimate Payment?

☐ Yes ☐ No Has amoritization been balanced (Contracts with Subprogram M5)?

Payable Agreements (Grp Cat 02)

Payable Agreement	Task No.	Authorized $	Expenditures	Close Yes	Close No
Totals					

Reimbursable Agreements

	Reimbursable Agreement	Close Yes	Close No		Reimbursable Agreement	Close Yes	Close No
1				4			
2				5			
3				6			

Requested By	Date
Closed By	Date

Verification Check List *(To be completed by PSS)*

☐ **(Grp Cat 01)** -Verify if work order has federal funds

Agreements Closed?

Yes	No

☐ **Send Notice to Audit Office**

Agreements Scheduled for Final Billing

☐ **Balance and Close Work Order**

Comments

DOT Form 120-025 EF 5/99

Responsible Work Order Manager

1. Initiate a request to Region Program Management or appropriate Region/service center/modal office that the work order is complete.

Project Management

Project management refers to the office that is responsible for monitoring and managing the work orders for the organization/programs. It could be Region Program Management, service center, modal manager, etc.

1. Determine whether a 30 day Work Order Closure Notice is needed for the work order. (For example: if the work order has been inactive for a long period of time, this step might not be necessary.)

2. Submit a written request to Region Financial Services/service center/modal office to close the work order.

3. On Highway Construction Program work orders (I and P programs), overruns of $10,000 or more will require an approved increase to the work order prior to closure. The Work Order Authorization should note that the work order is being closed.

4. For Washington State Ferries (WSF) projects, a Work Order Authorization is prepared that will balance the work order authorizations to actual expenditures by group category.

Region Financial Services/Service Center or Modal Office

If the work order being closed is a Region level work order (such as Ex, Hx, Kx), the work order will be closed following that Region' s guidelines for work order closure.

1. Complete a review of the work order and complete the Work Order Closure Request form (shown on the previous page).

    - The Region/service center/modal office is responsible for verifying all charges on state funded work orders. OSC Project Support Services will do a secondary review of charges on federally funded work orders.

2. Review WACT expenditures and compare to group category expenditures by using work order ledgers/FIRS/etc. to verify for incorrect charges.

    - Corrections for work operation codes, organization codes, object codes etc. that are for errors in a prior biennium should not be corrected since a correction will affect current biennium rather than prior biennium expenditure data. Corrections between groups that have no effect on appropriations, object

codes, etc. can be made (for example, correcting charges posted improperly to CAPS groups).

3. Review Work Done by Contractor.

    - If the work order is a contract, do the charges in Group Category 01, Payments to Contractor, match the amount that shows in the CAPS system? If there are erroneous charges in a CAPS group, such as materials lab charges, these will need to be transferred to the proper group on the work order.
    - Has the retainer or bond that the Department held been released? If not, are there outstanding claims against the contractor (IRS, Department of Revenue, Labor and Industries, etc.)?
    - Has amortization been balanced (contracts with subprogram M5)?
    - For Construction projects, has a copy of a letter transmitting a listing of the permanent and temporary final records to the OSC Engineering Records Vault been placed in the project file?

4. Review the Payable Agreements.

    - Have all payable agreements (including tasks) on the work order been paid? If not, was work deleted from this project and paid on another project; or was the work canceled? If the work was completed but there are unpaid invoices, the work order should not be closed.
    - For WSF, notify the consultant liaison to send a letter to the consultant to verify and accept payments.
    - If the agreement is on multiple projects (work orders), it is necessary to verify that all areas of the agreement are complete before requesting that OSC Project Support Services close the agreement. (Note: Agreement closure can be requested prior to work order closure or after work order closure by submitting an e-mail request to OSC Project Support Services.)
    - For task agreements, determine if this is the last open task on the agreement and if so, contact the master agreement manager to determine whether the master agreement can also be closed.

5. Review the Reimbursable Agreements.

    - If a portion of the work being performed on the work order was reimbursable by a third party, indicate on the Work Order Closure Request whether the agreement can be closed. This will notify OSC Project Support Services to schedule the agreement for final billing.
    - If the agreement is on multiple projects (work orders), it is necessary to verify that all areas of the agreement are complete before requesting that OSC Project Support Services close the agreement. (Note: Agreement closure can be requested prior to work order closure or after work order closure by submitting an e-mail request to OSC Project Support Services.

6. Review the Comments.

    - The comments section can be used for any unusual situations that OSC Project Support Services needs to be aware of prior to closing the work order, such as journal vouchers to correct erroneous charges between group categories that are not yet reflected on the work order ledger.

7. Submit the completed Work Order Closure Request form to OSC Project Support Services.

8. For D3 and D4 work orders, send a copy of the work order closure form to OSC Facilities Office

OSC Project Support Services

1. Review Work Done by Contractor (if the work order has federal funds).

    - If the work order is a contract, do the charges in Group Category 01, Payments to Contractor, match the amount that shows in the CAPS system? If there are erroneous charges in a CAPS group, such as materials lab charges, these will need to be transferred to the proper group on the work order.
    - Verify that any retainers have been released.

2. Review the Payable Agreements and:

    - Close any payable agreements listed for closure.
    - Send a copy of the Work Order Closure Request form to the Audit Office for agreements which require audit: GC, GCA, RR, UC, UT, and Y agreements with an authorization of $100,000 or more are subject to audit.

3. Review the Reimbursable Agreements and:

    - Schedule any reimbursable agreements listed for closure for final billing.

4. Review the Balance and Close Work Orders and:

    - Balance the authorized dollars to actual expenditures by group category.
    - Close all work order tables (GRUP, CSPA, WORD).

5. Return the completed Work Order Closure Request form to the Region/service center/modal office that originated the request.

Appendix E: Program Management Contacts

Northwest Region / MS: NB-82, MS-105 / Fax: 206-440-4806

Name	Position	Phone
Azim Sheikh-Taheri	Program Manager	206-440-**4761**
Program Development Group		
Pani Saleh	Asst. Program Manager - Pgm Devlpmnt	206-440-**4766**
Sharif Shaklawun	Program Development Engineer	206-440-**4769**
Mohammad Hasan	Scoping/Estimating Team Leader	206-440-**4768**
Jeff Davies	Scoping/Estimating Team Leader	206-440-**4767**
Mario Mathieson	Scoping/Estimating Team Leader	206-440-**4780**
Michael Taylor	Support Group Engineer	206-440-**4764**
Program Management and Monitoring Group		
Steve Olling	Asst. Program Manager - Pgm Monitoring	206-440-**4749**
Chuck Gleich	Subprogram Manager (I1)	206-440-**4740**
Dawn Lopez	Subprogram Monitor (I1)	206-440-**4742**
Ed Walker	Subprogram Manager (P1, I2)	206-440-**4744**
William Imhof	Subprogram Monitor (P1, I2)	206-440-**4745**
Debra Rubin	Subprogram Manager (P2, P3, I3, I4)	206-440-**4743**
Dale Brisbois	Subprogram Monitor (P2, P3, I3, I4)	206-440-**4747**
Ronnie Chin	Project Control Engineer	206-440-**4746**
Vacant	Customer Support Engineer	206-440-**xxxx**
Steve Morse	STIP & Special Projects Manager	206-440-**4750**
Workforce Scheduling Group		
Gary Liffick	Workforce Manager	206-440-**4748**
Vacant	Workforce Engineer	206-440-**4751**

North Central Region / MS: Wenatchee / Fax: 509-667-2940

Name	Position	Phone
Paul Mahre	Program Manager	509-667-**2900**
Dave Honsinger	Planning Engineer (Acting)	509-667-**2906**
Paul Kingsley	Project Control Engineer (Acting)	509-667-**2902**

Olympic Region / MS: 47440 / Fax 360-357-2601

Name	Position	Phone
Randy Dunn	Program Manager (Acting)	360-357-**2602**
Marty Garman	Assistant Program Manager	360-357-**2617**
Connie Deer	Project Control Engineer	360-357-**2677**
Dan Carruth	Strategic Program Development Engineer	360-357-**2678**
Anna Zaharris	Program Engineer (P program)	360-357-**2676**
Vacant	Program Assistant (P program)	360-357-**2xxx**
Cyndy Shea	Program Engineer (I program)	360-357-**2604**
Stephanie Alexander-Butters	Program Assistant (I program)	360-357-**2791**

Southwest Region / MS: S-15 / Fax 360-905-2222

Name	Position	Phone
Glenn Schneider	Program Manager	360-905-**2030**
Bruce Kerslake	Program Development Engineer	360-905-**2033**
Vacant	Project Operations Engineer	360-905-**xxxx**
Pam Kytola	Asst. Program Operations Engineer	360-905-**2035**
Vacant	Asst. Program Operations Engineer	360-905-**xxxx**
Paul Duby	Asst. Program Development Engineer	360-905-**2034**
Bonnie Wyman	Program Development Technician	360-905-**2031**

South Central Region / MS: Yakima / Fax 509-577-1603

Name	Position	Phone
Todd Trepanier	Program Manager	509-577-**1626**
Brian White	Assistant Program Manager	509-577-**1625**
Bill Preston	Improvement Manager (I program)	509-577-**1629**
Christy Sauriol	Improvement Program Asst.	509-577-**1627**
Bob Weyand	Preservation Manager (P program)	509-574-**3996**
Rick Lange	Preservation Program Asst.	509-574-**3996**
Phil Wells	Project Control Asst. (I and P)	509-577-**1624**

Eastern Region / MS: Spokane / Fax 509-324-6005

Name	Position	Phone
Harold White	Program Manager	509-324-**6025**
Ray Thompson	Project Control Engineer (I and P)	509-324-**6027**

Mike Melvin	Project Definition Engineer	509-324-**6112**
Sandi Wendling	Program Management Assistant	509-324-**6026**

Olympia Service Center / MS: 47325 / Fax 360-705-6812

Name	**Position**	**Phone**
Rick Smith	Director of Program Management	360-705-**7150**
Cheryll Day	Secretary Supervisor	360-705-**7130**
Chris Schroeder	Senior Office Assistant	360-705-**7152**
Programs Branch		
Greg Selstead	Program Management Engineer (I and P)	360-705-**7130**
Vacant	Program Manager (P1, I4)	360-705-**7131**
Tom Dillon	Construction Program Specialist (P1, I4)	360-705-**7136**
Ron Rolfer	Program Manager (P2, P3)	360-705-**7134**
Doug Pulse	Construction Program Specialist (P2)	360-705-**7137**
Mitzi Frick	Construction Program Specialist (P3)	360-705-**7142**
Roy Grinnell	Program Manager (I1, I6, I7)	360 705-**7133**
Aaron Ward	Construction Program Specialist (I1,I6,I7)	360-705-**7139**
John McLaughlin	Program Manager (I2, I3)	360-705-**7135**
Stacey Kelsey	Construction Program Specialist (I2,I3)	360-705-**7138**
Pat Morin	Priority Development & Mgmt. Engineer	360-705-**7141**
Dean Walker	Prioritization Support Engineer	360-705-**7149**
Omar Miller	Project Definition Engineer	360-705-**7148**
Operations Branch		
Aaron Butters	Operations Engineer	360-705-**7153**
Rick Judd	Funds Management Engineer	360-705-**7120**
Lauren Jenkins	Federal Authorization Engineer	360-705-**7127**
Sue Watson	Federal Funds Analyst	360-705-**7123**
Dave Killaby	Federal Authorization Assistant	360-705-**7125**
Doreen Sinclair	Authorizations & Operations Manager	360-705-**7121**
Judy Berrian	Construction Program Auth. Engineer	360-705-**7128**
Bill Kelley	Operations Program Devl. Engineer	360-705-**7122**
Firas Maklouf	Authorization Asst. (NW, SC, OSC)	360-705-**7124**
Vacant	Authorization Asst. (NC, OLY, SW, EA)	360-705-**7129**
Celia Walker	Systems & Analysis Manager	360-705-**7143**
Jan Robinson	Construction Program Analysis Engineer	360-705-**7144**
Mark Flynn	Systems Liaison Engineer	360-705-**7146**

Appendix F: Federal Funds

Interstate Maintenance (IM)

Title 23 United States Code - Highways,
Chapter 1, Section 119

This program provides funds to states to maintain the Interstate System for resurfacing, restoring, rehabilitating, and reconstructing. These funds may not be used for capacity expansion projects, such as general purpose lanes. IM funds may be used for HOV lanes, auxiliary lanes, new interchanges, new rest areas, and additional noise walls.

The federal share is generally 90%, although certain safety projects may be 100%, subject to a 10% limit of the annual IM apportionment. All of Washington' s IM apportionment goes to WSDOT. If all of a state' s IM apportionment will be used in a federal fiscal year, the state may be eligible to apply for additional Interstate Maintenance Discretionary (IMD) funds.

For the complete text of Section 119 of the United States Code, see:

- http://www4.law.cornell.edu/uscode/23/119.html

National Highway System (NHS)

Title 23 United States Code - Highways,
Chapter 1, Section 103

This program provides funds for the National Highway System, the 163,000 mile network of interconnected routes that serve major population centers, international border crossings, ports, airports, public transportation facilities, and other intermodal transportation facilities. The NHS includes the Interstate System, the defense strategic highway network and strategic highway connectors, and some urban and rural principal arterials. The system is intended to meet national defense requirements and serve both interstate and interregional travel.

Approximately 3.5 percent of the NHS routes in Washington consist of intermodal connectors owned by local jurisdictions. However, all NHS funds go to WSDOT with consideration given to this in the allocation of funds in the Surface Transportation Program (STP). NHS funds generally require a 20% match from the state. For interstate projects, a 10% state match is used. Some safety projects are eligible for 100% federal funds. There are no discretionary NHS funds.

For the complete text of Section 103 of the United States Code, see:

- http://www4.law.cornell.edu/uscode/23/103.html

Surface Transportation Program (STP)

Title 23 United States Code - Highways,
Chapter 1, Section 133

The STP program provides the most flexibility in where funds may be used. STP funds may be used on all highways and bridges, including the accommodation of other transportation modes. They may not be used on local or rural minor collectors routes, with an exception of some safety, research, and technology transfer programs.

TEA-21 requires that part of a state' s STP apportionment be allocated to particular programs or population areas. The remaining regular STP funds are combined with Minimum Guarantee funds into what is known as the STP flexible funds. The distribution of the STP flexible funds is decided within the state. In Washington, the STP flexible funds have a distribution of 34% to WSDOT, 22% for population areas administered by the MPOs and RTPOs, 22% for statewide competitive administered by the Transportation Improvement Board, and 22% for rural economic development administered by the Community Economic Revitalization Board. STP funds require a 20% match from the state or local jurisdiction. There are no discretionary STP funds.

For the complete text of Section 133 of the United States Code, see:

- http://www4.law.cornell.edu/uscode/23/133.html

Highway Bridge Replacement and Rehabilitation Program (HBRRP)

Title 23 United States Code - Highways,
Chapter 1, Section 144

This program provides funds to states for the replacement or rehabilitation of deficient bridges (bridges which are unsafe because of structural deficiencies, physical deterioration, or functional obsolescence). A state may also use bridge funds to construct a bridge to replace any low water crossing (regardless of the length of such low water crossing), replace any bridge which was destroyed prior to 1965, replace any ferry which was in existence on January 1, 1984, or replace any road bridges rendered obsolete as a result of United States Corps of Engineers flood control or channelization projects and not rebuilt with funds from the United States Corps of Engineer.

At least 15% and not more than 35% of the funds are to be used on off-system federal aid bridges unless otherwise approved by the USDOT Secretary. The distribution of the bridge funds is decided within the state. In Washington, the HBRRP flexible funds have a distribution of 60% to WSDOT and 40% to local agencies through the TransAid Service Center. The federal share of a bridge project must be 80% of the cost. A state may apply for additional Bridge Discretionary funds. In contrast to the IM discretionary program, it is not necessary to use all of the available bridge apportionment in order to apply.

For the complete text of Section 144 of the United States Code, see:

- http://www4.law.cornell.edu/uscode/23/144.html

Congestion Mitigation and Air Quality (CMAQ)

Title 23 United States Code - Highways,
Chapter 1, Section 149

The primary objective of the CMAQ program is to fund projects and programs in air quality non-attainment and maintenance areas for ozone, carbon monoxide, and small particulate matter (PM10) which reduce transportation related emissions. The Metropolitan Planning Organizations (MPOs) that are designated as non-attainment or maintenance areas in Washington are: 1) Puget Sound: King, Pierce, and Snohomish counties (carbon monoxide, ozone and particulates), 2) Vancouver and Clark Counties (carbon monoxide and ozone), and 3) Spokane (carbon monoxide and particulates). Yakima also is a non-attainment area for carbon monoxide and particulates and will receive CMAQ funds as soon as a State Implementation Plan (SIP) for carbon monoxide or particulate air quality are submitted to the Environmental Protection Agency (EPA).

Each MPO with non-attainment or maintenance receives a federal allocation of CMAQ funds and selects projects for funding from those submitted by the agencies within their area. Funds may be used for a variety of programs and projects to attain or maintain a national ambient air quality standard. The projects or programs should likely contribute to reductions in vehicle miles traveled, reductions in fuel consumption, or improved traffic flow. Eligible projects and programs are Commute Trip Reduction (CTR), Transportation Demand Management (TDM), HOV lanes, park-and-ride lots, paving or sweeping to reduce particulate matter, bike and pedestrian facilities, transit projects, some intelligent transportation systems, improved signalization, and others.

CMAQ funding in Washington is distributed based upon federal formulas for eligibility. Due to incongruities in the federal formula distribution, Washington receives no additional funding for Yakima' s non-attainment status. Yakima will

receive CMAQ funds based only on its pro-rata population share and not its attainment status. An example of funding to Washington for FFY 1999 is shown in the table below. There is no CMAQ discretionary program.

Example of CMAQ Distribution to Washington for FFY 1999

Jurisdiction	FFY 1999 Funding Level Dollars	Percent of Total State Distribution
Puget Sound	$16,444,046	77.6
Spokane	$2,570,896	12.1
Vancouver	$1,814,073	8.6
Yakima	$359,788	1.7
Total	**$21,188,803**	**100.0**

For the complete text of Section 149 of the United States Code, see:

- http://www4.law.cornell.edu/uscode/23/149.html

High Priority Projects

Congress often specifies funds for named high priority projects in either authorization bills, such as TEA-21, or in annual USDOT appropriations bills. (In the past, these projects have been called demonstration projects.) High priority project funds may only be spent for the project identified in either TEA-21 or the appropriations bills. High priority projects do not bring additional revenue to the state. They instead add constraints on funds that are received in the regular apportionment.

Appendix G: Performance Measures

The following performance measures have been established by subprogram for the 99-01 highway construction program. If a subprogram is not listed below, performance measures have not been established at this time.

I1 Subprogram

Measures:

- Number of rural miles added
- Dollar value of travel time savings (rural only)
- Number of ad dates planned (all mobility)

I2 Subprogram

Measures:

- Number of accident locations mitigated (HALs and HACs only)
- Reduction of societal costs of accidents (all safety)
- Number of ad dates planned (all safety)

I3 Subprogram

Measures:

- Number of trunk system lane miles built
- Dollar value of travel time savings (trunk only)
- Number of ad dates planned (all types)

I4 Subprogram

Measures:

- Number of fish barriers removed
- Number of fish aided
- Number of ad dates planned (fish and stormwater)

P1 Subprogram

Measures:

- Number of lane miles paved
- Statewide average pavement structure condition (all types)
- Number of ad dates planned (all types)

P2 Subprogram

Measures:

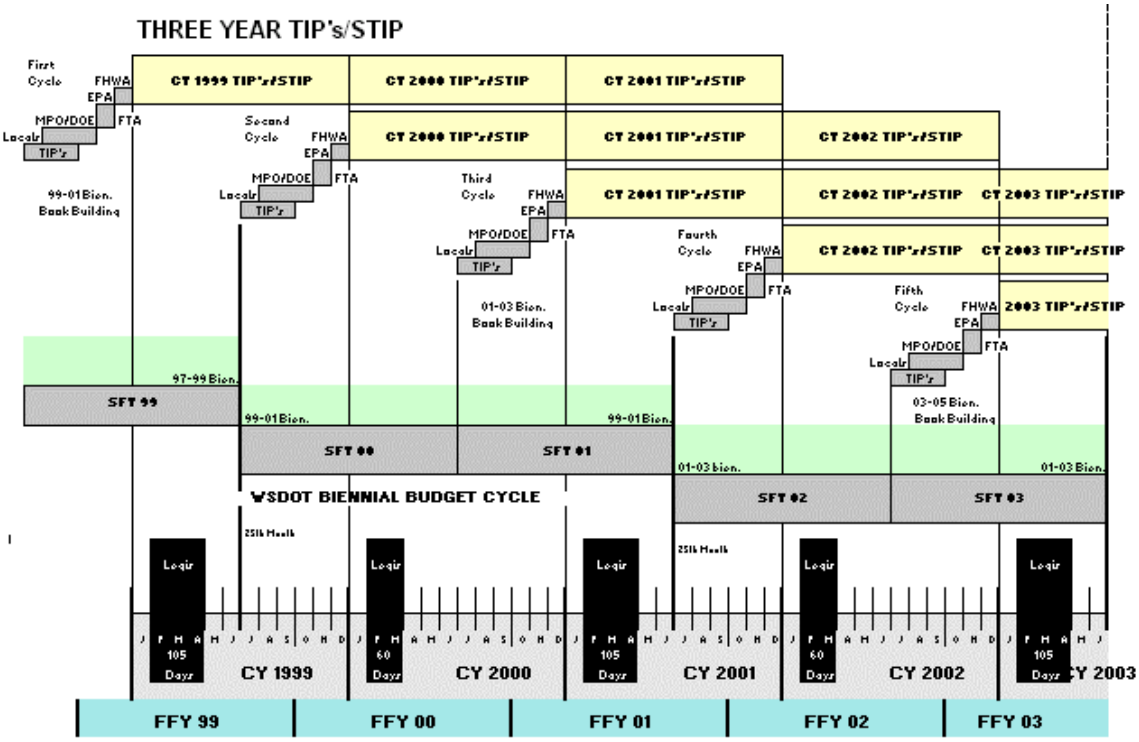
- Number of bridges rehabilitated/replaced
- Average condition of bridges in 20-year plan (rehab/replace only)
- Number of ad dates planned (all types)

P3 Subprogram

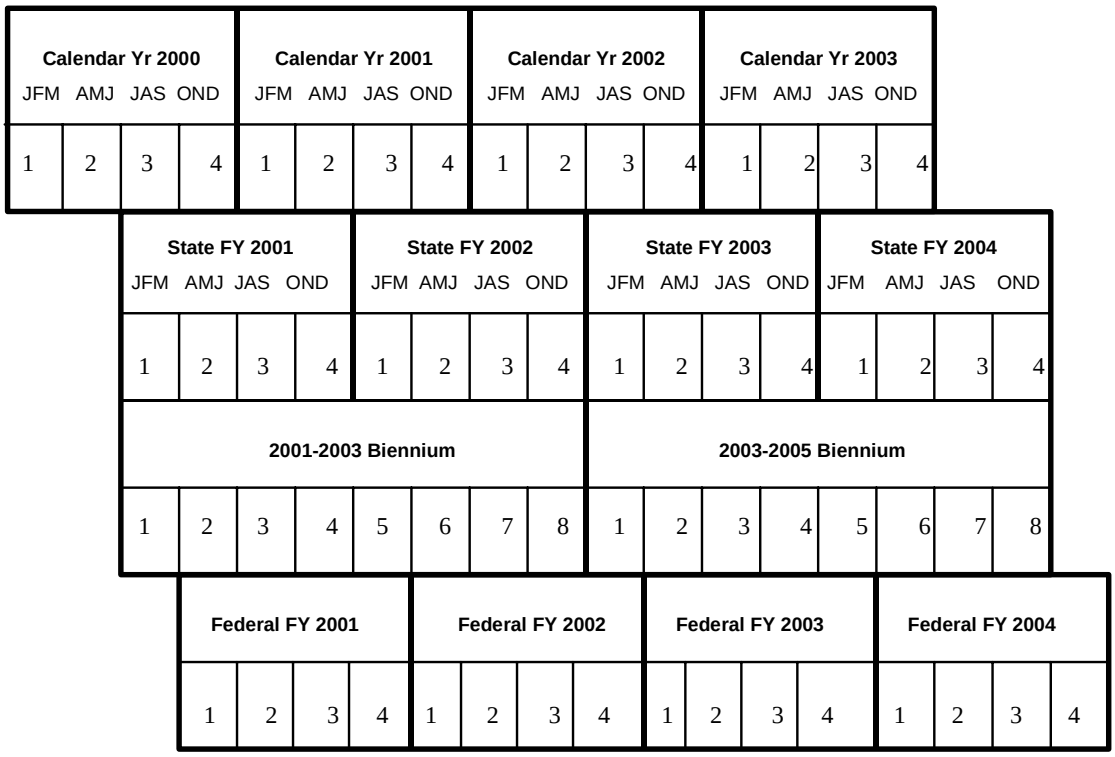
Measures:

- Number of unstable slope projects
- Cost savings from prevented road closures (unstable slopes only)
- Number of ad dates planned (all types)

Appendix H: Charts and Graphs



Fiscal Calendars



Calendar Year ⟹ January through December

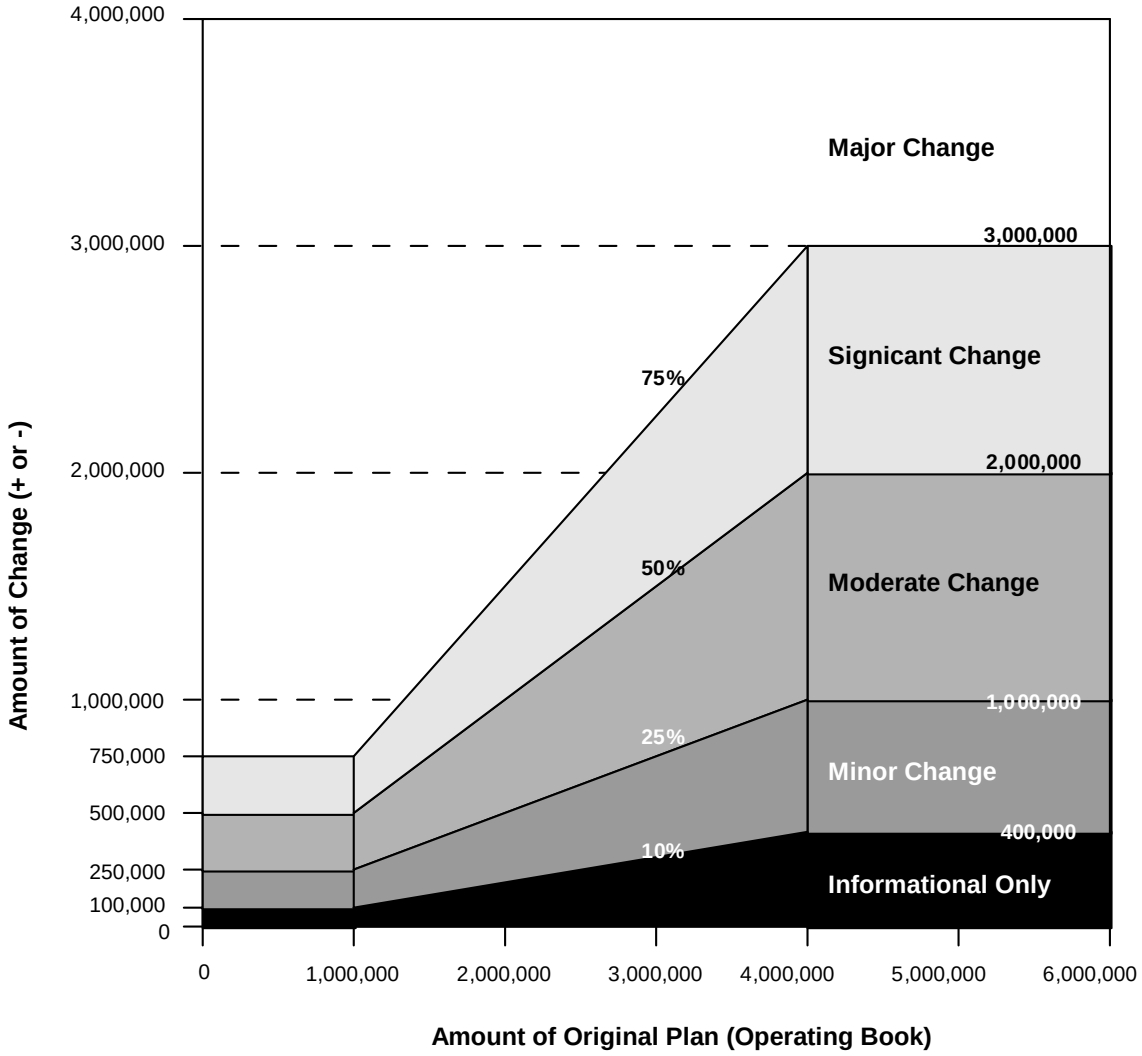
State Fiscal Year ⟹ July through June

Biennium ⟹ July (odd year) through June (next odd year)

Federal Fiscal Year ⟹ October through September

1,2,3,4,etc. ⟹ Quarters

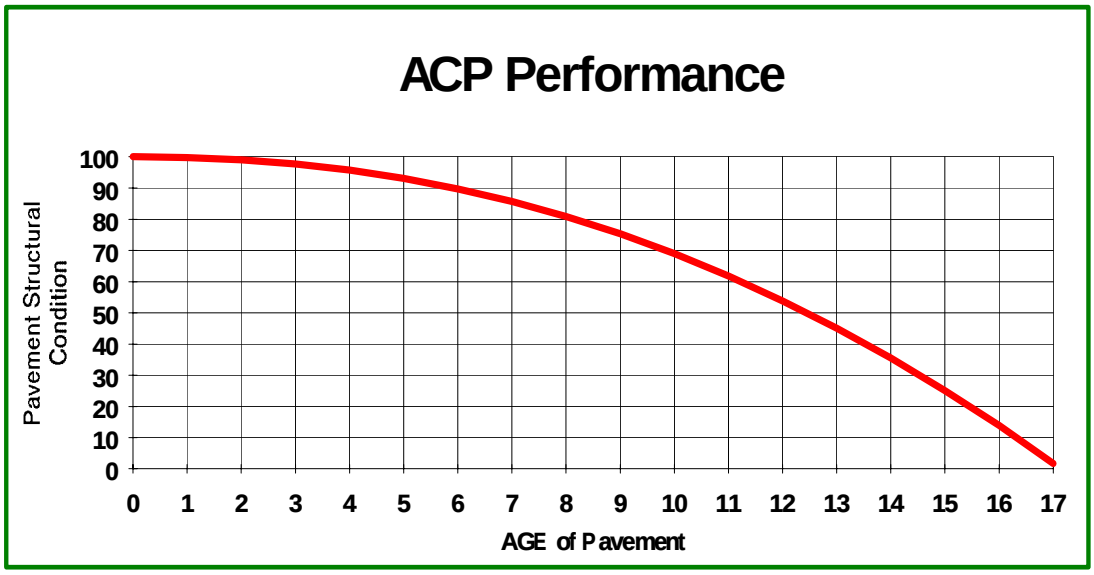
Change Thresholds (Costs)



KEY FOR APPROVAL

- Informational changes approved by Regions
- Minor changes approved by OSC Program Managers
- Moderate changes approved by OSC Program Mgmt Engineer
- Significant changes approved by Asst. Secretary of P&PSC
- Major changes approved by Dept. Project Screening Board

Pavement Condition vs. Pavement Age



Pavement Structural Condition

100–75 = Very Good
75–50 = Good
50–25 = Poor
25–0 = Very Poor

Pavement Life Cycle Costs